SUPREME COURT OF THE UNITED STATES.

No. 680.

WILLIAM BURDELL, D. MARSHALL SMITH, AND SUMNER T. SMITH, PLAINTIFFS IN ERROR,

VS.

AUGUSTUS DENIG AND WILLIAM E. IDE.

IN ERROR TO THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF OHIO.

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1 At a circuit court of the United States within and for the sixth judicial circuit and southern district of Ohio, begun and held at the court-house in the city of Cincinnati, on the first Tuesday of October, being the third day of that month, in the year of our Lord one thousand eight hundred and seventy-one, and of the Independence of the United States of America the ninety-sixth. Present the honorable Philip B. Swing, one of the judges of said court. Among the proceedings had were the following, to wit.

WILLIAM BURDELL, D. MARSHALL SMITH, and Sumner T. Smith, assignees, &c., *vs.* AUGUSTUS M. DENIG AND WM. E. IDE.	1465.—Trespass on the case.

Be it remembered, that heretofore, to wit, on the 7th day of October, in the year of our Lord one thousand eight hundred and sixty-one, came the plaintiffs, by Ewing & Hunter, their attorneys, and filed in the clerk's office of the court aforesaid their certain declaration against the defendants herein, which said declaration is in the words and figures following, to wit:

Declaration.

In the circuit court of the United States for the seventh circuit and southern district of Ohio, October term, 1861.

WILLIAM BURDELL, D. MARSHALL SMITH, and Sumner T. Smith, assignees, &c., *vs.* AUGUSTUS M. DENIG & WILLIAM E. IDE.	Trespass on the case.

2 The plaintiffs, William Burdell, D. Marshall Smith, and Sumner T. Smith, complain of the defendants, Augustus M. Denig and William E. Ide, in a plea of trespass on the case, for that Allen B. Wilson, a citizen of the United States, before and at the time of the making of the letters-patent, and of the com'itting of the grievances hereinafter mentioned, was the original and first inventor of certain new and useful improvements in sewing-machines, to wit, at Franklin County, in the district aforesaid, and thereupon heretofore, to wit: on the 12th day of November, A. D. 1850, at the city of Washington, to wit, in the district aforesaid, certain letters-patent signed by Alex'r H. H. Stewart, Secretary of the Interior, countersigned by Thomas Ewbank, Commissioner of Patents, and sealed with the seal of the Patent-Office of the United States, bearing date the day and year last aforesaid, were granted to the said Allen B. Wilson, (a certified copy, from the Patent-Office, of which said patent the plaintiffs now bring here into court) whereby was granted and secured to said Allen B. Wilson, his heirs, administrators, or assigns for the term of fourteen years from said twelfth day of November, A. D. 1850, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvements, a description whereof is given in the words of the said Wilson in the schedule annexed to and made a part of said letters-patent so brought into court as aforesaid. That on the 26th day of November, A. D. 1850, the said Allen B. Wilson assigned and conveyed to
3 Elisha E. Lee, of Cambridge, Washington County, New York, by a duly-executed instrument of writing, one undivided fourth part

of all his right, title, and interest in said patent, except the right to use said improvements in the State of New Jersey, and excepting also the right to use said improvements for sewing leather in the State of Massachusetts, which said assignment was duly recorded in the Patent-Office of the United States on the 27th day of December A. D. 1850, an exemplification of which said record of said assignment is now to the court here shown, under the seal of said Patent-Office. That on the said 26th day of November, A. D. 1850, the said Allen B. Wilson assignee and conveyed to Aaron P. Kline, of New York City, by an instrument in writing, duly executed, the remaining three-fourth part of said improvements, except the right to construct. use, and sell the same in the State of New Jersey, and the right to use the same in sewing leather in the State of Massachusetts, which said last-named assignment was duly recorded in the Patent-Office of the United States on the 5th day of December, A. D. 1850, (an exemplification of which said record of said assignment is now to the court here shown, under the seal of said Patent-Office.) That the said Aaron P. Kline, afterwards, to wit: on the 28th day of December, A. D. 1850, assigned and conveyed to Joseph N. Chapin, of Adams, Berkshire County, Massachusetts, by an instrument of writing duly executed, one undivided sixth part of the right and interest so assigned and conveyed to him as aforesaid by the said Allen B. Wilson,

4 which said last-named assignment was duly recorded in the Patent-Office aforesaid, on the 8th day of January, A. D. 1851, an exemplification of which said record of said assignment is now to the court here shown, under the seal of said Patent-Office. That the said Elisha E. Lee afterwards, to wit: on the 6th day of May, A. D. 1851, by a like instrument in writing, duly executed, and recorded in said Patent-Office, on the 8th day of May, A. D. 1851, assigned and conveyed to the said Aaron P. Kline five undivided sixths, part of the right and interest in said patent, conveyed to him as aforesaid by the said Allen B. Wilson, except the States of Indiana, New Hampshire, Vermont, Virginia, California, Oregon, Mississippi, Louisiana, and Wisconsin, an exemplification of which said record of said assignment is now to the court here shown, under the seal of said Patent-Office. That the said Elisha E. Lee, afterwards, to wit: on the same 6th day of May, A. D. 1851, by a like instument of writing, duly executed and recorded in said Patent-Office on the 8th day of May, A. D. 1851, assigned and conveyed to the above-named Joseph N. Chapin the remaining one undivided sixth part of his said interest in said patent, not conveyed by him as aforesaid to the said Aaron P. Kline, and excepting the same States, excepted as above in his said assignment to the said Kline, an exemplification of which said record of said assignment is now to the court here shown, under the seal of said Patent-Office.

That the said Joseph N. Chapin, being interested in manner aforesaid in the said patent-right, afterwards, to wit, on the 19th day of May, A. D. 1851, by a like instrument in writing, duly executed, and recorded in the said Patent-Office on the 21st day of May, A. D. 1851, assigned

5 and conveyed to the said Aaron P. Kline all of his, the said Chapin's, right and interest in said patent, except within the State of New Jersey, for the then unexpired residue of the term thereof, an exemplification of which said record of said assignment is now to the court here shown, under the seal of said Patent-Office.

That the said Aaron P. Kline being interested in the said patent-right as herein above set forth, afterwards, on the 9th day of July, 1851, by a like instrument of writing, duly executed, and recorded in the Patent-Office aforesaid on the 14th day of July, A. D. 1851, assigned and con-

veyed to Royal Ball, of the City of Troy, Rensselaer County, New York, all of his the said Kline's right and interest so acquired to and under the said patent for and during the residue of the term thereof then unexpired, within the States and Territories following named; Rhode Island, Delaware, Texas, Iowa, Florida, Arkansas, Minnesota, Kentucky, Ohio, and Deseret, an exemplification of which said record of said assignment is now to the court here shown, under the seal of said Patent-Office. That afterwards, to wit, on the 19th day of September, A. D. 1851, the said Royal Ball and the said Elisha E. Lee, by a like instrument in writing, duly executed, and recorded in the Patent-Office aforesaid on the 25th day of September, A. D. 1851, assigned, transferred, and conveyed to James H. McKernon and Jacob Page Chapman, of the town (now city) of Indianapolis, Marion County, Indiana, the full and exclusive right and privilege of making, constructing, using, and lending to others to be used, the said A. B. Wilson's patent sewing-machine,
6 within the State of Ohio, except the county of Lorain, for and during the term of fourteen years from the date of said patent, to wit, November 12, A. D. 1850, an exemplification of which said record of said assignment is now to the court here shown, under the seal of said Patent-Office. That the said James H. McKernon and Jacob Page Chapman afterwards, to wit, on the 17th day of January, A. D. 1852, by a like instrument in writing, duly executed, and recorded in the Patent-Office on the 2nd day of February, A. D. 1852, assigned, transferred, and conveyed to William Burdell, of the town (now city) of Columbus, Franklin County, Ohio, (one of the plaintiffs in this case,) the full and exclusive right and privilege of making, constructing, using, and vending to others to be used, the said A. B. Wilson's said patent sewing-machine in the county of Franklin, in the State of Ohio, excepting a right granted to the Ohio penitentiary to be used for the clothing of the inmates thereof, and excepting one right, each, granted to Charles Scott, William T. Bascom, Samuel Medary, and D. W. Brown, to be used in their respective families, and in the penitentiary as aforesaid, and not otherwise nor elsewhere, an exemplification of which said record of said assignment is now to the court here shown, under the seal of said Patent-Office. That the said William Burdell afterwards, to wit, on the 22d day of January, A. D. 1861, by a like instrument of writing duly executed, and recorded in the Patent-Office aforesaid on the 20th day of March, A. D. 1861, assigned, conveyed, & transferred to the plaintiffs, D. Marshall
7 Smith and Sumner T. Smith, one equal undivided half of his the said William Burdell's interest in and to the said patented improvements, within the county of Franklin, in the State of Ohio aforesaid, an exemplification of which said record of said assignment is now to the court here shown under the seal of said Patent-Office. That in the manner and by the means aforesaid the plaintiffs are jointly, as tenants in common, the sole, true, and lawful owners, within the county of Franklin, and State of Ohio, aforesaid, except as in the conveyance to the said William Burdell, above mentioned, the same is excepted, of the said patented improvements in sewing-machines invented by and patented to the said Allen B. Wilson as hereinbefore stated and set forth, and as further patented to the said Wilson upon the surrender of said original patent, and the re-issuing and renewal thereof as hereinafter particularly stated and set forth, in the proportions of one half to the said William Burdell, and the remaining half to the said D. Marshall Smith and Sumner T. Smith, jointly. That by reason of defects and insufficiencies of description and specification in the said Wilson's specifications, annexed to and made a part of said patent of his said improve-

ments, the said patent so granted as aforesaid was invalid, by accident and mistake, and without any fraud or deceptive intent on the part of said Wilson, wherefore, he, the said Wilson, did surrender the said patent to the Commissioner of Patents, and paid to said Commissioner the further sum of fifteen dollars, to wit, on the 22d day of January, A. D. 1856, at the said Patent-Office in Washington
8 City, and then and there filed in said office corrected specifications of said improvements, to the end that new letters-patent should be issued to him for the same invention, for the residue of the period then unexpired for which the said original patent was granted, in accordance with said corrected description and specifications, in pursuance of the statute in such cases made and provided; and therefore, to wit, on the day and year last aforesaid, the said Commissioner, in due form of law, and in conformity with the statute aforesaid, did issue to the said Allen B. Wilson new letters-patent for the same invention, in two separate grants numbered 345 and 346, for the residue of the period then unexpired for which the said original patent was issued, exemplifications of which said new letters-patent No. 345 and 346, with the specifications and drawings thereto severally annexed, duly certified under the seal of said Patent-Office, are to the court here shown, that by reason of said last-mentioned specifications annexed to said letters-patent No. 345 being also defective, without any fraud or deceptive intent on the part of said Wilson, but by accident and mistake, said last-named new letters-patent No. 345 were also invalid, and the said Wilson afterwards, to wit, on the 9th day of December, A. D. 1856, did surrender to the said Commissioner of Patents the said last-named new letters-patent, and paid to him the further sum of fifteen dollars, to wit, at the Patent-Office aforesaid, and then and there filed in said office corrected specifications of that part of said improvements covered by said patent, to
9 the end that new letters-patent should be issued to him for the same invention for the residue of the period then unexpired, for which the said original patent was granted in accordance with said last-named corrected specifications, in pursuance of the statute in such cases made and provided; and thereupon, to wit, on the day and year last aforesaid, the said Commissioner of Patents, in due form of law and in conformity with the statute in such cases made and provided, did issue to the said Allen B. Wilson a new patent, No. 414, for the same invention, with the last-named specifications thereto annexed, for the residue of the period then unexpired for which the said original patent was issued; an exemplication of which said last-named letters-patent, with the said last-named specifications and drawings thereto annexed, duly certified under the seal of said Patent Office, is to the court here shown. And the plaintiffs aver that the said letters-patent severally inure to their benefit as assignees under the said patentee as herein above set forth, and that by reason of the premises they are vested with the exclusive right to said invention and improvements as secured thereby within the county of Franklin, in the State of Ohio, except as in that behalf is hereinbefore mentioned, and that said last-named letters-patent were severally signed by Robert McClelland, Secretary of the Interior, countersigned by C. Mason, Commissioner of Patents, and sealed with the seal of the Patent-Office of the United States, and remained unrevoked and in full force and effect.

And they further aver that the said invention and improvements, so patented as last aforesaid to the said Allen B. Wilson, by said
10 patent No. 414, were and are substantially as follows: The first part thereof consists in combining a needle and shuttle or their

equivalents, to make stiches, with a table to support the material, and an automatic feed apparatus which will move the cloth without supporting it, and to which the cloth is not attached, the whole substantially in the manner set forth in the specifications to said last-named letters-patent annexed, whereby the cloth is fed regularly, so that stitches of uniform length are produced, while the cloth, being supported on a table or platform and not confined to the feed apparatus by pins or clamps, may be turned and twisted in the feeding mechanism so as to sew irregularly curved seams. The second part thereof consists in driving a sewing-machine shuttle, by means of a yoke or pair of jaws, coincident with each other in their motion, and nearly coincident with the motion of the shuttle, which is so shaped that a greater or less part of it is embraced by the jaws, being held thereto by the shuttle-race in which it travels, substantially as set forth in the said last named specifications.

And the plaintiffs further aver that the said invention and improvements so patented, as aforesaid, to the said Allen B. Wilson, by the said letters-patent, re-issued and numbered (346) three hundred and forty-six, above mentioned and referred to, were and are substantially as follows:

The first part thereof consists in causing the cloth or material to be sewed or embroidered to progress regularly by the action of the surfaces between which it is clamped, substantially in the manner and
11 for the purposes in the specifications to said patent annexed.

The second part thereof consists in holding the cloth in place, by means of a needle or some equivalent thereof, at the proper time, in combination with feeding surfaces, the whole acting substantially as set forth in said specifications.

The third part thereof consists in arranging the surfaces which cause the cloth to progress in such manner in relation to a needle that they, or one of them, shall also perform the duty of stripping the cloth or substance to be sewed from the needle in the manner set forth in said specifications.

The nature of the fourth part thereof consists in so mounting and attaching one of the surfaces which clamp the cloth and cause it to progress, that such surface may be removed away from its fellow, for the purpose of introducing or removing cloth or other material, as described in said specifications.

They further aver that said improvements, so patented, were new and useful; that said Allen B. Wilson, at the time of the application for said patent, and when the same was issued and re-issued as aforesaid, was a citizen of the United States; that he was the original and first inventor of said improvements so patented, and that the same were not known or used before his said invention, and were not at the time of his said application for said patent in public use or on sale, with the consent or allowance of the said Wilson.

Yet the said defendants, well knowing the premises, but contriving and wrongfully intending to injure the plaintiffs in this behalf as
12 assignees, as aforesaid, and to deprive them of the profits, benefits, and advantages which they might, and otherwise would have derived and acquired from making, issuing, and vending said invention and improvements, after the making of said letters-patent and re-issuing of the same, as aforesaid, to wit, on the 23d day of January, A. D. 1861, at the county of Franklin, in the State of Ohio, and within the district aforesaid, and on divers other days and times between that day and the commencement of this suit, unlawfully and unjustly, without

the leave or license of the plaintiff, or that of the said Allen B. Wilson, or any other person or persons entitled as assignee or assignees under him having authority in that behalf, and against the will of the plaintiffs, made, constructed, put into practice, and used, by themselves and by their agents, servants, and employees, divers, to wit, twenty sewing-machines, having, in the construction thereof, in whole or in part, the said invention and improvements so patented, as aforesaid, to the said Allen B. Wilson, and in which the plaintiffs then were and still are interested as assignees, as aforesaid, in said county, and that the said defendants, during all the time aforesaid, have, in the manner and by the means aforesaid, used and employed the said invention and improvements in the business of sewing and manufacturing various fabrics and commodities in said Franklin County, to the damage and injury of the plaintiffs, and have made and secured to themselves gains and profits to the like injury and damage of the plaintiffs, in all amounting to a large sum of money, to wit; the sum of twenty thousand dollars, and
13 therefore they bring their suit.

EWING & HUNTER,
Attorneys for Plaintiffs.

Upon which said declaration is the following indorsement, to wit:

Security for costs.

I am good for costs in this case.

ROBERT SHIELDS.

And thereupon, on said 7th day of October, in the year last aforesaid, there was issued, out of the clerk's office of said court, the writ of summons ad respondentum against the defendants herein; which said writ is in the words and figures following, to wit:

Summons.

UNITED STATES OF AMERICA,
Southern district of Ohio, ss.:

The President of the United States of America to the marshal of the southern district of Ohio, greeting:

You are hereby commanded to summon Augustus M. Denig and William E. Ide, citizens of, and residents in, the State of Ohio, if they be found in your district, to be and appear in the circuit court of the United States for the southern district of Ohio aforesaid, at Cincinnati, on the fourth Tuesday in the month of October, 1861, to answer unto William Burdell, D. Marshall Smith, and Sumner T. Smith, citizens of, and resident in, the State of Ohio, of a plea of trespass on the case, damages, $20,000.

And have you then and there this writ:
14 Witness the honorable Roger B. Taney, Chief Justice of the United States, this 7th day of October, A. D. 1861, and in the 86th year of the Independence of the United States of America.

Attest:
[SEAL.] JOHN McLEAN, *Clerk.*

Upon which said writ are the following endorsements, to wit:

Cause of action.

Suit brought to recover damages for infringement by the defendants of the plaintiff's right as assignees &c., of A. B. Wilson's patented improvements in sewing-machines. Damages $20,000.

EWING & HUNTER,
Atty's for Plaintiffs.

Security.

Robert Shields acknowledges himself security for all costs for which the plaintiff may be liable in this suit. (See precipe.)

And afterwards, to wit, on the 9th day of October, in the year last aforesaid, came said marshal to whom said writ was in form aforesaid directed, and returned the same into the clerk's office of said court with his proceedings endorsed thereon, in the words and figures following, to wit:

Marshal's return to summons.

Served by copy, in person, on W. E. Ide & A. M. Denig, at Columbus, Ohio.

A. C. SANDS,
U. S. Marshal,
By JOHN H. WHEELER,
Deputy U. S. Marshal, Southern District.

15 And afterwards, this case was continued from term to term until, to wit, the 22d day of April, in the year of our Lord one thousand eight hundred and sixty-two, on which said day, an entry was made upon the journal of said court, in said case, in the words and figures following, to wit:

Entry.

BURDELL, SMITH, ET AL. *vs.* DENIG & IDE. } 1465.—Case.

On motion to the court, leave is given defendants in this cause to plead, answer, or demur within sixty days, and cause continued until next October term.

And afterwards, to wit, on the 28th day of October, in the year last aforesaid, an entry was made upon the journal of said court, in said case, in the words and figures following, to wit:

Entry.

BURDELL, SMITH, ET AL. *vs* DENIG & IDE. } 1465.—Case.

By consent of parties, the continuance entered at the present term of the above-named case is opened, and leave is given to the defendants to plead in the case on or before the 20th day of November next, and the said case is continued to the next January term.

And afterwards, to wit, on the 29th day of December, in the year last aforesaid, came the defendants by H. Stanberry, their attorney, and by leave of court first had and obtained, filed in the clerk's office of
16 said court their plea herein, which said plea is in the words and figures following, to wit:

Plea.

U. S. court, southern district of Ohio.

AUGUSTUS M. DENIG AND WILLIAM E. IDE
ats.
WILLIAM BURDELL ET AL. } 1465.

And the said Augustus M. Denig and William E. Ide come and defend &c., and say that they are not guilty of the said supposed grievances laid to their charge, in manner and form as the said plaintiffs have complained against them; and of this they put themselves upon the country, and the said plaintiffs do the like.

By HENRY STANBERRY & TAFT & PERRY,
Att'ys for Defendants.

And afterwards, this case was continued from term to term until, to wit, the 31st day of October, in the year of our Lord one thousand eight hundred and sixty-three, on which said day an entry was made upon the journal of said court, in said case, in the words and figures following, to wit:

Entry.

BURDELL, SMITH, ET AL.
vs.
DENIG & IDE. } 1465.—Case.

This day came the parties, by their attorneys, and thereupon came a jury, to wit, J. M. Cobb, F. B. Randall, John Walke, J. R. Horrocks, Jas. Wilson, D. J. Stewart, Thos. Williams, Joshua Wadsworth,
17 H. G. Armstrong, N. Bartlett, H. W. Taylor, and Eli C. Crippen, who were duly empanelled & sworn well & truly to try the issue joined between the parties in this cause; and the evidence not being closed the jury were adjourned until Monday morning at half past nine o'clock.

And afterwards, to wit, on the 2d day of November, in the year last aforesaid, an entry was made upon the journal of said court, in said case, in the words and figures following, to wit:

Entry.—Judgment.

BURDELL, SMITH, ET AL.
vs.
DENIG & IDE. } 1465.—Case.

This day again came the parties by their attorneys, and also the jurors heretofore empanelled and sworn herein, who upon their oaths do say that the said defendants are not guilty in manner and form as the said plaintiffs have complained against them. It is therefore considered by the

court that said defendants go hence without day, and recover of the plaintiffs their costs in this behalf expended, taxed at $, and execution is awarded therefor. And thereupon the plaintiffs, by their attorney, gave notice that they would move the court for a new trial in this case.

And afterwards this cause was continued from term to term until, to wit, the 6th day of Jan'y, in the year of our Lord one thousand eight hundred and sixty-four, on which said day, came the plaintiffs, by Geo. E. Pugh & Chas. B. Collier, their attorneys, and filed in the clerk's office of said court their motion for new trial herein, which said
18 motion for new trial is in the words and figures following, to wit:

Motion for new trial.

U. S. circuit court.

W'm Burdell et al.
vs.
Denig & Ide.

And now come the plaintiffs by their att'ys and move the court to set aside the verdict of the jury in this case, and for a new trial, and for reason say, that the court erred in construing the legal effect of the assignments of the letters-patent from A. B. Wilson to A. P. Kline & E. E. Lee, and from McKernon & Chapman to the plaintiff W'm Burdell, and in instructing the jury to return a verdict for the defendants.

GEO. E. PUGH & CHA'S B. COLLIER,
For Pl'ffs.

And afterwards, to wit, on the 31st of May, in the year last aforesaid, an entry was made upon the journal of said court, in said case, in the words and figures following, to wit:

Entry.

William Burdell et al.
vs.
A. M. Denig & W. E. Ide.
1465.—On motion for new trial.

This day this cause came on to be heard upon the motion to set aside the verdict and judgment and for a new trial, and was argued by counsel; and upon consideration thereof the court order that said
19 verdict and judgment be set aside and a new trial granted, the costs to abide the event of the suit.

And afterwards, to wit, on the 24th day of June, in the year last aforesaid, an entry was made upon the journal of said court, in said case, in the words and figures following, to wit:

Entry.

William Burdell et al.
vs.
Denig & Ide.
1465.—Trespass on the case.

On motion of plaintiffs' counsel, it is ordered by the court that the defendants on the trial of this cause produce in court their books and

any accounts or memorandums showing the amount, extent, and quantity of work made by the defendants, their agents or hands, from the first of January, 1852, until the commencement of this suit, by sewing-machines, in the county of Franklin, to be used on the trial of the cause by the plaintiffs if they deem it advisable, subject, however, to the opinion of the court as to the right of the plaintiffs, upon said production in court, to examine and use said books, accounts, and memorandums as evidence on said trial.

And afterwards, to wit, but on the same day, and in the year last aforesaid, an entry was made upon the journal of said court, in said case, in the words and figures following, to wit:

20 *Entry.*

WILLIAM BURDELL ET AL.
vs.
DENIG & IDE. } 1465.—Trespass on the case.

On motion of counsel this cause is hereby continued at the costs of the defendants, (for this term,) and specially set for trial on Thursday the 13th day of October next.

And afterwards, to wit, on the 17th day of October, in the year last aforesaid, an entry was made upon the journal of said court, in said case, in the words and figures following, to wit:

Entry.

BURDELL, SMITH, ET AL., ASSIGNEES, &C.,
vs.
DENIG & IDE. } In case.

This day came the parties by their attorneys, and thereupon came a jury, to wit, Lysle Lodwick, Lewis Dagner, Parker Rankin, Pryor Kirk, Nelson Franklin, James Shirley, Alexander Pendry, William Roney, William Jolly, Andrew Hickenlooper, F. H. C. Allen, and George Maxwell, who were duly empanelled, sworn, and affirmed, well and truly to try the issue joined between the parties herein; and the evidence not being finished, the court adjourned the jury until to-morrow at 9½ o'clock, until which time this cause is continued.

And afterwards the trial of this cause progressed from day to
21 day, until, to wit, the 20th day of October, in the year last aforesaid, on which said day an entry was made upon the journal of said court, in said case in the words and figures following, to wit:

Entry.

BURDELL, SMITH, ET AL.
vs.
DENIG & IDE. } 1465.—In case.

This day again came the parties by their attorneys, and also the jurors heretofore empanelled, sworn and affirmed herein, and thereupon by consent of parties a juror is withdrawn, and on motion to the court by plaintiff's attorney leave is given to the plaintiff to amend his declaration in the above-entitled cause by the first Monday of January next, upon the condition of the payment by said plaintiff, on or

before said day, of all the costs of the defendants which have accrued since the filing of the pleas, and the payment of the plaintiff's costs which have accrued since the filing of said pleas upon the conclusion of the case and it is further ordered, that where depositions have been taken in either of the above cases, or in the chancery causes, in which the above plaintiffs are complainants, under an agreement that the same may be read in these cases, that the costs of said depositions shall be divided pro rata between the cases to which such agreement extends, and this case is continued.

And afterwards, to wit, on the 29th day of December in the year last aforesaid, came the plaintiffs, by C. D. Coffin, their attorney, and filed in the clerk's office of said court their amendment to the declara-
22 tion herein, which said amendment is in the words and figures following, to wit:

Amendment to declaration.

Circuit court of the United States, southern district of Ohio.

WILLIAM BURDELL ET AL.
vs.
AUGUSTUS M. DENIG ET AL. } Case No. 1465, now pending.

And now come the plaintiffs in this action, and, by leave of the court had & obtained at the October term, 1864, thereof, amend their declaration, to be inserted in that part of the declaration containing the plaintiffs' title and right to the letters-patent therein described, & before the statement of the injury committed by the defendants, (at the place in the original declaration marked *,) which amendment is as follows, that is to say:

And the plaintiffs aver that the said re-issued patents were obtained during the time when the title to said patent & to said invention, for the county of Franklin aforesaid, was in said Burdell, and said re-issued patents were obtained by the consent and with the approbation of said Burdell, manifested by his ratification and adoption of the same; and the plaintiffs further aver that afterwards, to wit, on the 5th day of March, 1860, at the county of Franklin, to wit, at said district, the said Burdell then & there ratified & adopted the aforesaid re-issued letters-patent, & thereby then & there became and was the owner of the whole interest in the aforesaid letters-patent & the privileges thereby secured, & had & held the exclusive right to the same, and within & throughout the county of Franklin aforesaid.

23 And afterwards, to wit, on the 9th day of February, in the year of our Lord one thousand eight hundred and sixty-five, an entry was made upon the journal of said court, in said case, in the words and figures following, to wit:

Entry.

BURDELL, SMITH & CO.
vs.
DENIG & IDE. } 1465.—Case.

Continued and specially set for the 2d Tuesday of next April term.

And afterwards, to wit, on the 25th day of April, in the year last aforesaid, an entry was made upon the journal of said court, in said case, in the words and figures following, to wit:

Entry.

BURDELL, SMITH, ET AL.
vs.
DENIG & IDE.
} 1465.—Case.

This day came the parties by their attorneys, and thereupon came a jury, to wit: Samuel H. Goodin, Albert Halliday, Nathan King, E. B. Clark, Lysle Lodwick, Jacob Cortigan, Francis Cornell, Joseph Bell, Robert Simms, John Beal, and George D. Hendricks, who were duly empanelled and sworn well and truly to try the issue joined between the parties, and the evidence not being finished, the court adjourned the jury until to-morrow morning at 9½ o'clock, until which time this cause is continued.

And afterwards, the trial of this case progressed from day to day, until, to wit, the 5th day of May in the year last aforesaid, on which said day an entry was made upon the journal of said court, in said
24 case, in the words and figures following, to wit:

Entry.

BURDELL, SMITH, ET AL.
vs.
DENIG & IDE.
} 1465.—Case.

This day again came the parties by their attorneys and also the jurors heretofore empaneled and sworn herein, who, not being able to agree upon a verdict, were discharged from the further consideration of this case, and cause continued.

And afterwards, at the June term of said court for the year last aforesaid, this cause was continued. And afterwards, to wit, on the 13th day of October, in the year last aforesaid, an entry was made upon the journal of said court, in said case, in the words and figures following, to wit:

Entry.

WILLIAM BURDELL ET AL.
vs.
DENIG & IDE.
} 1465.—Trespass on the case.

This day came the parties by their attorneys, and thereupon came a jury, to wit: J. W. Sherley, Jno. W. Jackson, Jno. Nerny, Wm. Jolly, Pryor Kirk, Bennett Lewis, Herbert Johnson, R. D. Mayhew, William Hoon, Ebenezer Harrison, Henry Von Phul, and Wm. Roney, who were duly empaneled, and sworn, and affirmed well and truly to try the issue joined between the parties, and the evidence not being finished, the court adjourned the jury until 9 o'clock to-morrow morning, to which time this cause is continued.

And afterwards, the trial of this case progressed from day to day, until, to wit, the 18th day of October, in the year last aforesaid,
25 on which said day, an entry was made upon the journal of said court, in said case in the words and figures following to wit:

Entry.—Verdict.

BURDELL, SMITH, ET AL.
vs.
DENIG & IDE. } 1465.—Case.

This day again came the parties by their attorneys, and also the jurors heretofore empaneled, sworn, and affirmed the truth to speak upon the issue joined between the parties in this cause, who upon their oaths do say that the defendants are guilty in manner and form as the plaintiffs have complained against them, and assess the damages of the plaintiffs by reason of the premises at the sum of six thousand two hundred dollars; and thereupon came the defendants and moved the court to set aside the verdict and for a new trial, for reasons on file.

And afterward, to wit, but on the same day and in the year last aforesaid, came the defendants, by their attorneys, and filed in the clerk's office of said court their motion for new trial herein, which said motion is in the words and figures following, to wit:

Motion for new trial.

United States circuit court, southern district of Ohio.

WILLIAM BURDELL ET AL.
vs.
A. M. DENIG AND WM. E. IDE.

And now come the defendants, and move the court to grant a new trial herein, and for cause show:

1. That the verdict is against the law.
26 2. That the verdict is against the evidence.
3. That the verdict is against the charge of the court.
4. That the court erred in excluding the testimony of N. D. Stoops and James Skardon as to the price of licenses to use the Wilson patent.
5. That the court erred in not charging the jury that the plaintiff could not, after the 11th day of July, 1860, change his policy and make the patent a close monopoly.
6. That the damages were excessive.
7. That there were other errors in the rulings and charge of the court to the prejudice of defendants.

SAM'L S. FISHER,
A. F. PERRY,
Deft's Att'ys.

And afterwards, to wit, on the 26th day of October, in the year last aforesaid, an entry was made upon the journal of said court, in said case, in the words and figures following, to wit:

Entry.

WILLIAM BURDELL ET AL.
vs.
DENIG & IDE. } 1465.—Case.

This case coming on to be heard upon the motion of defendants to set aside the verdict and for a new trial, was argued by counsel and sub-

mitted, and the court, upon consideration thereof, grant said motion, and order that said verdict be set aside and a new trial granted, upon payment by defendants of the costs for this term, within thirty days.

27 And afterwards, this cause was continued from term to term until, to wit, the 6th day of June, in the year of our Lord one thousand eight hundred and sixty-six, on which said day an entry was made on the journal of said court in said case, in the words and figures following, to wit:

Entry.

BURDELL, SMITH, ET AL. *vs.* DENIG & IDE. } 1465.—In case.

This day came the parties, by their attorneys, and thereupon came a jury, to wit: Samuel Scott, J. W. Keys, George B. Frye, C. W. Gest, D. W. Windfaugh, H. Labold, T. D. Book, Edwin Stebbins, William De Beck, T. Vibbard, Jonathan Stabler, and Joseph Sawyer, who were duly empanelled, sworn and affirmed well and truly to try the issue joined between the parties in this cause; and the evidence not being finished the court adjourned the jury until to-morrow morning at 9 o'clock, until which time this cause is continued.

And afterwards, the trial of this cause progressed from day to day, until, to wit, the 13th day of June, in the year last aforesaid, on which said day an entry was made upon the journal of said court, in said case, in the words and figures following, to wit:

Entry.—Verdict.

BURDELL, SMITH, ET AL. *vs.* DENIG AND IDE. } 1465.—Case.

This day again came the parties, by their attorneys, and also the jurors heretofore empaneled, sworn and affirmed the truth to speak up-
28 on the issue joined between the parties, who, upon their oaths do say that the said defendants are guilty, in manner and form as the said plaintiffs hath complained against them; and they assess the damages of the plaintiffs, by reason of the premises, at $125.00. Whereupon the parties give notice of motion for new trial.

And afterwards, to wit, on the 17th day of September, in the year last aforesaid, an entry was made upon the journal of said court, in said case, in the words and figures following, to wit:

Entry.

WILLIAM BURDELL ET AL. *vs.* DENIG & IDE. } 1465.—Case.

In this case the plaintiffs present their bill of exceptions to the rulings and opinion of the court during the trial, at the present term, which bill is here allowed, signed, and sealed and ordered to be entered of record.

And which said bill of exceptions is in the words and figures following, to wit:

Bill of exceptions.

BURDELL ET AL., PLAINTIFFS, *vs.* DENIG AND IDE, DEFENDANTS. } Bill of exceptions.

Be it remembered, that on the trial of this cause before a jury, the plaintiffs, to maintain the issue on their part, gave in evidence a certified copy of the patent issued to A. B. Wilson, November 12th, A. D. 1850, marked A, and the re-issued patents, numbered 346, marked B,
29 & 414, marked C, all of which are hereto attached and made part hereof, & also their title to the same, as alleged in their declaration, & also gave in evidence testimony tending to prove that the defendants had infringed the rights of the plaintiffs, by the use in the county of Franklin, Ohio, of several sewing-machines, and among them four machines known and called Singer machines; & the plaintiffs gave in evidence testimony tending to prove that the feeding-device in all of said machines used by the defendants, including those known and called Singer machines, was substantially on the principal and plan of operation of the feeding-device described in and patented to Wilson by the patents aforesaid.

The plaintiffs also gave in evidence testimony tending to prove the amount of profit made by the defendant by the use of the plaintiffs' patented invention, exceeding in the aggregate the sum of $5,000.

The defendants, to maintain the issue on their part, offered in evidence the following paper:

"In consideration of the sum of eighty dollars, to me paid by J. Payne Lowe, the receipt whereof is acknowledged, I do hereby assign, transfer, and set over unto the said Lowe, his representatives and assigns, the exclusive right to use, and sell to others to be used, in the county of Franklin, in the State of Ohio, Singer's patent sewing-machines, as mentioned in the patent granted to Isaac M. Singer, dated August 12, 1851, together with the right to have the said machines delivered to be
30 used, or sold to be used, in the said county of Franklin, in the State of Ohio.

"And I hereby covenant that I have good right to make the assignment aforesaid.

"In witness whereof I have hereunto set my hand and seal, this 4th day of February, A. D. 1857.

"WM. BURDELL. [SEAL.]

"In presence of—
"J. P. BUNCK.
"GEORGE BUNCK."

To the introduction of this paper the plaintiffs objected, but the objection was overruled & the paper admitted; to which ruling of the court, overruling the plaintiffs' objection and admitting said paper in evidence, the plaintiffs then and there excepted. And the paper was then read to the jury.

The defendants then gave in evidence an assignment from Lowe to Singer & Co., in the same words as that from Burdell to Lowe, above set forth, and also testimony tending to prove that the Singer machines used by the defendants were purchased of Singer & Co.

The defendants also gave in evidence testimony tending to prove

that the machines called Singer machines, used by the defendants, were made as the Singer machines had always been made.

The defendants also gave in evidence a paper, the execution of which was admitted, & it was also admitted that the paper was to be treated as though executed by the plaintiff, Burdell, which paper is in these words:

31 "Article of agreement made and entered into, this thirteenth day of March, 1860, between Sarah Burdell, of the county of Franklin, in the State of Ohio, and H. Crary, of the same county, witnesseth:

"That said Sarah Burdell does hereby authorize and empower the said Crary, for the full term of four years and eight months, or from the date hereof until the twelfth day of November, 1864, as fully and completely as she might herself, had not this agreement been entered into, to sell and use, and grant to others the right to use, in the said county of Franklin, A. B. Wilson's sewing-machines, as known and denominated for sewing cloth and other fabrics, patented Nov. 12, 1850, and re-issued Jan. 22nd and Dec. 9th, 1856, and, also, the sewing-machine patented by J. M. Singer, together with all the improvements which have been made already, or shall hereafter be made in the same, without additional costs, and, also, all other sewing-machines of every name and description to which the said Sarah may have power to exercise any control whatever; and the said Sarah hereby covenants and agrees with the said Crary, that during the said time of four years and eight months she will not sell or use, or grant to others the right to sell or use, in the said county of Franklin, the sewing-machines above specified, or any other of any name, or kind, or description, without the consent of said Crary.

"2d. That the said Crary agrees to make out and deliver to the
32 said Sarah Burdell or her authorized agent attorney, on the first day of each and every month, a full and accurate report of all sales of sewing-machines of every name, kind, and quality made by him or his agents during the preceding month, stating the first cost of each such machine in the purchase of the same from the manufacturers or their agents until ready for shipping, exclusive of freight and other incidental charges; also, the price at which such machine was sold by said Crary or his agents; and stating, also, the difference between the said first cost of the said machines and the price at which the same were sold, and which difference for the preceding month, on the first day of each month when the said report is delivered, as aforesaid, the said Crary agrees to pay the said Sarah Burdell, or her authorized agent or attorney, thirty-five per centum during the first six months from the date hereof, and forty per centum thereafter, or until the twelfth of November, 1864, provided, however, if the said percentage for any one month during the first four months from the date hereof should not amount to the sum of seventy-five dollars, the said Crary agrees to make it up to the full sum of seventy-five dollars, and the said Sarah agrees that for any such deficiency or difference between the said percentage and the sum of seventy-five dollars, the said Crary may re-imburse himself out of the first excess of said percentage over one hundred dollars after the expiration of the said four months from the date hereof.

"3d. It is agreed by the said Sarah Burdell and the said Crary that
33 in the prosecution of an injunction to restrain or prevent the sale or use of any sewing-machine in said county of Franklin, in violation of the right, power, and authority hereby vested in the said

Crary to sell or use such machine in said county, and in the prosecution of any suit at law for the recovery of damages for the sale hereafter, or for the use of any such sewing-machine hereafter sold, the costs and expense of any such suit at law or in equity shall be equally born' by the said Sarah and the said Crary, each paying one-half of such costs and expenses, and each sharing equally, that is, each being entitled to one-half of the net amount received in any such proceedings at law or in equity: Provided, that no such injunction shall be applied for, or any such suit at law instituted, without the consent of both parties to this agreement: Provided also, that for the purpose of prosecuting any such suit at law that may be agreed upon by the parties hereto, the power and authority herein vested in the said Crary shall remain and continue in full force and effect after the expiration of said term of four years and eight months: Provided also, that in any suits or proceedings at law or in equity which the said Sarah may see fit to institute on account of the use hereafter of any sewing-machines hereafter sold, the said Crary shall not be required to defray any portion of the costs and expenses or be entitled to any share of the amount so recovered in any suit or proceedings so instituted, as last aforesaid by said Sarah.

"4th. It is agreed that the first report of sales herein provided
34 for shall be made on the first day of May next, and shall include all sales of sewing-machines from this date until the said first day of May.

"Witness our hands and seals this 13th day of March, 1860.

(Signed) "SARAH BURDELL. [SEAL.]
"H. CRARY. [SEAL.]

"In presence of—
"FRANKLIN GALE."

The defendants then offered in evidence a paper signed by said Crary, in these words:

"Received of A. M. Denig one hundred and nineteen $\frac{50}{100}$ dollars, in full for the use of four of J. M. Singer & Co., two of Grover Baker and one Battel's sewing-machine, from the 13 March, 1860, until the expiration of all the patents in same belonging to me, or in which I have any interest.

"Dated October 9, 1861.

(S'd) "H. CRARY."

To the admission of which paper the plaintiffs objected, because it was made and executed after the commencement of this suit, and because there is no proof of the truth of the facts therein stated; but the court overruled the objections and admitted the paper in evidence, to which ruling, overruling the objections and admitting said paper in evidence, the plaintiffs then and there excepted. And the paper was then read to the jury.

There was testimony introduced tending to prove that in January, 1860, the plaintiffs had publicly advertised that they would soon have machines to sell; that Burdell in October, 1860, had sold to one Rikenberger a shop-right to use said Wilson machine for $12.50, and
35 he had also given his verbal assent that one Bryfagle might use in his house an old second-hand machine for $5.

There was also testimony tending to prove that after July 1, 1860, the plaintiffs declined to sell machines, and declined to license the use of any machines, and desired to retain the use of said machine as a close monopoly, and so told the defendants.

And thereupon the plaintiffs offered to prove why they had given to said Rikenberger a license to use one of said machines, to which the defendants objected, and the court sustained the objection and refused to permit the plaintiffs to show the reason for the granting of said license; to all which the plaintiffs then and there excepted.

The plaintiffs in rebutting offered testimony tending to establish that on the 3d day of October, in the year 1860, a written notice was given to the said Holdamand Crary, that in consequence of repeated failures on the part of said Crary to comply with the conditions of the contracts entered into as aforesaid, the said license or power of attorney was revoked; a copy of which written notice is hereto appended and made part hereof, marked F.

F.

COLUMBUS, *Oct. 3d*, 1860.

MR. CRARY:

SIR: In consequence of repeated failures on your part to comply with the conditions of the license granted to you on the thirteenth of March last, some of which I will mention:

36 1st. You have not handed me, or to one authorized to receive it, a complete report of sales of sewing-machines made during the preceding month, neither have you paid over to me or to one authorized to receive it, the amount of money due at the same time, as provided for in said license; your failure to do so, although the amount would have been small, has put me to great inconvenience.

2nd. You have not described each and every machine sold, stating the kind, the first cost, and what each and every machine sold for, the name of each and every such machine, as provided for in said agreement or license.

3d. It was understood between us that such measures should be taken to secure the sales of all machines, or to stop others from selling any in which my patent in any way entered or because a part; that plan would have greatly increased the profits to each, and is, I think, a fair construction of said license, and might be a reasonable inference from the language of the contract.

4th. You have also, as I learn, consented to and entered into a written agreement with one person, or more, to sell and use sewing-machines on which my patent (for this county) is stamped, for much less than the price that I am entitled to under your written agreement with me, and your reports have not shown any profits from sales made by any one else, and if they had I should not have received any moneys for sales made contrary to the terms of said written agreement entered

37 into on the thirteenth of March last, as before specified.

5th. As there is still in your hands most of the money that was due to me for the months of July, August, and September, which has not been paid at the time specified in said contract, and is yet unpaid.

6th. I understand the law of license to be, that the sole right which the licensee has to sell or use a machine depends on the license, and he can sell or use under said license only by complying with the conditions; so that his use or sale aside from the express terms of the license is an infringement, and others buying from one who is in fault I suppose also infringe, and they also become wrong-doers. For these and other reasons I hereby revoke the power of attorney or license granted to you, and I shall hereafter act as though said power of attorney or license had never been given.

(Signed) SARAH BURDELL.

And the plaintiff offered testimony tending to prove that the said Crary, before the giving of said notice, had failed to render accounts and make payments as provided in said license.

There was also testimony tending to prove that before the date of the said receipt the plaintiff Burdell had notified the defendants that the rights and interests of the said Crary had been terminated, and that he the said Crary had no right to authorize the defendants to use any of the machines actually used by them or to receive pay therefor.

38 And after all the testimony was closed the plaintiff asked the court to instruct the jury that the license of Burdell to J. Payne Lowe of the 4th of February, 1857, did not authorize him, and those deriving rights under that license, to use in the machine known and called Singer machine, in said county of Franklin, the feeding device patented to A. B. Wilson, which the court refused to give, but did charge the jury that the said license authorized the said Lowe and all claiming title from him to use in Franklin County the Singer machine, with a feeding device operating upon the principle and plan of that patented to Wilson; to which refusal of the court to charge as asked, and to the said charge as given, the plaintiffs then and there excepted.

The plaintiffs also asked the court to charge the jury that the paper, dated March 13th, 1860, by which Sarah Burdell appears to have contracted with Holdamand Crary, was revocable at the will of the said Sarah Burdell; or if the real interest was in William Burdell, at his will, in the name of the said Sarah; and that if the said revocation was without cause, that the remedy of Crary was an action for the breach of contract; which the court refused to give, but charged that the said instrument was a power of attorney coupled with an interest, and could not be revoked for any cause; to which refusal to charge as asked, and to the charge as given, the plaintiffs then and there excepted.

39 The plaintiffs also asked the court to charge the jury that the paper from S. Burdell dated March 13, 1860, required Crary as a condition of all his rights under said contract to perform the part of said contract to be by him done, and that if said Crary failed to perform, the other party was by reason of said non-performance at liberty and had the right to revoke the authority of the said Crary and terminate his interest under the said paper; which the court refused to give, to which refusal the plaintiffs then and there excepted.

And the plaintiffs then asked the court to charge the jury that in order to the effectual revocation of the power conferred on Holdamand Crary by the paper between Sarah Burdell and said Crary, dated March 13, 1860, or in order to the rescission of the contract by said paper shown, it was not, as between Crary & Burdell, necessary to procure any injunction against the said Crary, and that if the said Crary had not performed his part of the said contract the notice given in evidence signed by said Sarah Burdell, and dated October 3, 1860, was sufficient to revoke or rescind, as between the parties to said paper, and that as to any person having notice of such revocation or rescission, no injunction against Crary was necessary to the full effect of such revocation or rescission; which the court refused to give, to which refusal the plaintiff then and there excepted.

And the plaintiff then asked the court to charge the jury that, if you find that the paper from Sarah Burdell to Crary, dated October 3, 1860, was served on Crary within a year from its date, and that in July,

40 1861, in the conversation between Burdell and the defendants, Burdell told the defendants that Crary had no authority to sell

rights to use the sewing-machines or receive pay therefor, then the defendants had no right to make the payment to Crary, as set forth in the receipt of Crary, dated October 9th, 1861, and the receipt of the money at that time by Crary from the defendants is no defence to this action; which the court refused to give, to which refusal the plaintiffs then and there excepted.

The plaintiffs then asked the court to charge the jury that in this action the receipt of Crary to the defendants dated October 9th, 1861, is no defense in bar of the plaintiff's right to recover; which charge the court refused to give, to which refusal the plaintiff then and there excepted.

And the plaintiffs asked the court to charge the jury that the contract between Burdell and Crary of 13th March, 1860, vested no authority in Crary alone to compromise with a third party for past infringements of the rights of the plaintiffs, and if the defendant paid Crary for past infringements such payment is no defense to this action; which the court refused to give, but charged that Crary had authority to accept satisfaction for past infringements, and his settlement with infringers for prior infringements of the rights of the plaintiffs were conclusive upon the plaintiffs and barred their right of action for such infringements, to which refusal, and to the charge as given, the plaintiffs then and there excepted.

41 The plaintiffs then asked the court to charge the jury that the contract with Crary, the receipt of Crary of 9th October, 1861, the verbal assent that Bryfagle might use a machine, and the shop-right sold to Rinkenberger, are not sufficient to change the rule of damages from the profits which the plaintiffs would have made if they had not been embarrassed by the interference of the defendants, to a mere license price, because these acts of Burdell are not sufficient in law to establish a customary charge for the right to use the invention in said county of Franklin; which the court refused to give, to which refusal the plaintiffs then and there excepted.

And the said several exceptions herein stated having been duly taken and noted on the trial of said cause before the jury, are here during said term, signed, sealed, and allowed by the judge thereof, & ordered to be entered & made a part of the record.

H. H. LEAVITT. [SEAL.]

Exhibit "A" to foregoing bill of exceptions.

No. 7776.

The United States of America, to all to whom these letters-patent shall come:

Whereas Allen B. Wilson, of Pittsfield, Mass., has alleged that he has invented new and useful improvements in sewing-machines, which

42 he states have not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvements, and that the same are not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvements, and praying that a patent may be granted for that purpose:

These are therefore to grant, according to law, to the said Allen B. Wilson, his heirs, administrators, or assigns, for the term of fourteen years from the twelfth day of November, one thousand eight hundred and fifty, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvements, a description whereof is given in the words of the said Wilson in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof, I have caused these letters to be made patent, and the seal of the Patent-Office has been hereunto affixed.

Given under my hand, at the city of Washington, this twelfth day of November, in the year of our Lord one thousand eight hundred and fifty, and of the Independence of the United States of America the seventy-fifth.

ALEX'R H. H. STUART,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent-Office.
[L. S.] THOS. EWBANK,
Commissioner of Patents.

43 The schedule referred to in these letters-patent, and making part of the same.

To all whom it may concern:

Be it known that I, A. B. Wilson, of Pittsfield, in the county of Berkshire and State of Massachusetts, have invented certain new and useful improvements in a machine for sewing cloth and other fabrics; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings forming a part of this specification, in which—

Figure 1 is a view of the upper side of the machine taken in an oblique direction. Figure 2 is an inverted plan view of the under side of the machine. Figure 3 is a section taken through the centre of the plate, leaving the working part of the machine entire. Figure 4 is a detached view of the motion for operating the needle.

Similar letters of reference indicate corresponding parts in each of the several figures.

The nature of my improvements, which are applicable to a machine in which two threads are used, viz, one passed through the cloth by a needle, leaving a loop through which another thread is passed by a shuttle, consists, firstly, in an improved mode of operating the vibrating arm which carries the needle; secondly, in an improved mode of operating the shuttle, by which I can pass a thread during each of its motions, one during its motion in one direction, and another during its motion in the opposite direction; and, thirdly, in an improved
44 mode of holding and moving the cloth to be stitched.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction.

A is a plate of metal, of suitable form and strength, provided on its under side with bearings B B, which may be cast with it. C is the driving-shaft, which is mounted in the bearings B B, and carries a small fly-wheel, D. E is a circular disc of metal attached to or cast with the fly-wheel, D. *e e* are small studs or pins inserted in the face of the disc E on the same diameter, and at equal distances from the center or axis of the shaft C. F is a shaft or spindle mounted in bearings G G, secured to the upper side of the plate A. H is the needle-arm which is attached to the end of

alternately back and forth and the sliding-bar moving the cloth back at the proper time for passing the thread through it and slipping from the cloth while it (the cloth) is held by the needle so as to be ready for another motion. When two or three stitches have been made so as to secure the ends of the thread, the thread may be released from the hand of the operator; and the rotary motion of the shaft C being continued, the operation of the machine will proceed.

What I claim as my invention, and desire to secure by letters-patent, is forming a stitch by each throw of the shuttle and corresponding motion of the needle; that is to say, making one stitch at each forward and another at each backward motion of the shuttle, this being effected by the needle in combination with the shuttle, both constructed, arranged, and operating as herein described, or in any other mode substantially the same. Second, I claim the combination of the sliding-bar Q, the plate *r*, the feeding-plate V, the spring W, the screw *t*, the lever R, and the clamping-plate T, for holding and feeding the cloth to the needle and regulating the length of the stitch in the manner herein described,
50 or in any way substantially the same.

ALLEN B. WILSON.

Witnesses:
O. D. MUNN,
EL. POLHAMUS.

(Here follows diagram marked page 50.)

51 *Exhibit B to foregoing bill of exceptions.*

The U. States Patent-Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the re-issued letters-patent granted Allen B. Wilson Jan'y 22d 1856, No. 346.

In testimony whereof I, D. P. Holloway, Commissioner of Patents, have caused the seal of the Patent-Office to be hereunto affixed this sixteenth day of November, in the year of our Lord one thousand eight hundred and sixty-three, and of the Independence of the United States the eighty-eighth.

[SEAL.] D. P. HOLLOWAY.

No. 346.

The United States of America to all to whom these letters-patent shall come:

Whereas Allen B. Wilson, of Pittsfield, Mass., has alleged that he has invented a new and useful improvement in sewing-machines, (for which letters-patent were issued to him, dated 12th Nov'r, 1850, which letters having been surrendered by him the same have been cancelled & new letters ordered to issue to him on an amended specification,) which he states have not been known or used before his application; has made oath that he is a citizen of the United States, that he does verily believe that he is the original and first inventor or discoverer of the said improvement, and that the same have not, to the best
52 of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, signify

ing a desire of obtaining an exclusive property in the said improvements, and praying that a patent may be granted for that purpose:

These are therefore to grant, according to law, to the said Allen B. Wilson, his heirs, administrators, or assigns, for the term of fourteen years from the said twelfth day of November, one thousand eight hundred and fifty, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvements, a description whereof is given in the words of the said Wilson in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent-Office has been hereunto affixed.

Given under my hand at the city of Washington this twenty-second day of January, in the year of our Lord one thousand eight hundred and fifty-six, and of the Independence of the United States of America the eightieth.

ROBERT McCLELLAND,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent-Office.
[L. S.]
C. MASON,
Commissioner of Patents.

53 The schedule referred to in these letters-patent & making part of the same.

To all whom it may concern:

Be it known that I, A. B. Wilson, of Pittsfield, Berkshire County, Massachusetts, have invented a new and useful method of feeding the cloth or material to be sewed in machines for sewing, and that the following specification, taken in connection with the drawings, is a full, clear, and exact description thereof.

In the drawings, figure first is a prospective view of the machine from the upper side thereof; figure second is a plan of the bottom of the machine; figure third is a vertical section through the machine in the plane of the needle-carrier; and figure fourth is a detail view of the operating mechanism of the needle.

The same letters refer to the same parts in all the figures.

Prior to the date of my invention numerous sewing-machines had been devised and applied to use. In some of these machines the material to be sewed or embroidered has been advanced under the needle, or sewing-apparatus proper, by the hand of an operator, the material resting upon or against a table or support. In other machines the material has been secured upon a basting-plate, technically so termed, by means of pins or nippers, or some similar contrivance, and this plate received a regular progressive motion through the agency of suitable machinery.

54 In the former class of machines, the material could be turned and twisted at will, so that there was no difficulty in sewing seams of any reasonable curvature, but there was no guarantee for any regularity of stitch except the care and skill of the operator, and this, at best, is far inferior to the precision obtained by the action of machinery. In the latter class the regularity of stitch depended wholly upon precision of mechanical construction, and the stitch was, practically speaking, uniform in length under any given adjustment of the apparatus; but the baster-plate hampered the free motion of the cloth, prevented its being turned, and reduced the capabilities of the machine, preventing it from sewing seams of any considerable degree of curvature.

The attachment of the cloth to the basting-plate, moreover, required time, and thus reduced the actual performance of the machine.

These difficulties have impeded the introduction of sewing-machines to the extent that their merits in other respects demand, and the object of my invention is to remedy and obviate the difficulties incident both to a hand-feed or that derived from a baster-plate, retaining at the same time the good features of both of them.

To this end the nature of the first part of my invention consists in causing the cloth or material to be sewed or embroidered to progress regularly by the action of the surfaces between which it is clamped, substantially in the manner and for the purpose hereinafter set forth.

And the nature of the second part of my invention consists in holding the cloth in place by means of a needle, or some equivalent thereof, at the proper time, in combination with feeding-surfaces, the whole acting substantially as hereinafter specified.

And the nature of the third part of my invention consists in arranging the surfaces which cause the cloth to progress in such manner in relation to a needle that they, or one of them, shall also perform the duty of stripping the cloth or substance to be sewed from the needle, as herein set forth.

The nature of the fourth part of my invention consists in so mounting and attaching one of the surfaces which clamps the cloth and cause it to progress, that such surface may be moved away from its fellow for the purpose of introducing or removing cloth or other material, substantially in the manner herein described.

As it is more convenient to describe my invention by reference to a sewing-machine, as a whole, I have represented in the drawings and refer in this specification to a sewing-machine lately invented by myself to which my invention is represented as applied, but I do so for the purpose of exemplification merely, as my invention is applicable to various sewing and embroidering machines, with or without change of arrangement or alteration of the mechanical devices or trains of mechanism which give motion to the ultimate or really acting parts of my contrivance, it being in these latter which act immediately upon the cloth that my invention is found and consists.

In the drawings is represented a shuttle-machine whose bed-plate, *a*, has attached to it proper journal-boxes, *b b*, in which is secured a shaft, *c*, provided at one end with a crank and fly-wheel, and also with a pin-wheel, *d*, and a cam, *f*, the former communicating motion to the needle, the latter to the shuttle and feed-motions.

The wheel *d* has projecting from its face two small pins, d^1, d^2, which act alternately upon two arms, d^3, d^4, of a species of escapement, and thereby communicate an oscillating motion to the rock-shaft d^5, to which these arms are secured. This shaft is mounted in proper journals upon the bed-plate and carries a needle-bar to stalk d^6, upon whose back is fastened a spring, d^8, while the needle itself, d^7, is attached to this bar in any suitable manner. This needle is curved, is provided with an eye near its point, and is also slightly grooved on its convex side so as to guide the thread. Upon the bed-plate is mounted a standard, *e*, supporting an axis, e^1, upon which is mounted a bobbin, e^2, containing thread whose end is carried under a guide, e^3, afterward through a hole in a take-up and let-off spring, *d*, then through an aperture on the needle-carrier, and finally through the eye of the needle itself; as the driving-shaft revolves the needle reciprocates, passing back and forth through the material to be sewed.

The cam *f*, before referred to, has formed upon its surface a grooved

track or pin-way, f^1, in which rests a pin, f^2, projecting from a small lever, f^3, pivoted at f^4, under the bed-plate of the machine. This track is so formed as to alternately move and stop the lever f^3, so that it vibrates in one direction when the needle is in the cloth, then pauses while the needle is out of the cloth, returns in the opposite direction when
57 the needle is again through the cloth, and then pauses a second time. Upon the end of this lever are two jaws, f^5, f^6, which alternately act upon the shuttle g, and thus throw it back & forth in its race g^1. This shuttle carries a bobbin of thread as usual, is pointed at both ends, and has an eye or guide for the thread. In the action of the machine the needle enters the cloth, passes through it, & commences to rise and spread a loop of thread, which the point of the shuttle enters and spreads, passing through it, and leaving its thread in the loop; the needle then ascends, re-enters the cloth, and the same action takes place again except that the shuttle enters from the opposite side. The shuttle-thread is thus zigzagged through the loops of the needle-thread, and the stitch is less liable to ravel than the ordinary shuttle-stitch.

Upon the bed-plate of the machine is located a sliding-bar, h, having a roughened surface on its upper side, near one of its ends; it is pressed in the direction of the arrow x by a spring, h^1, secured to the bed-plate, the length of throw of this spring being limited by the head h^2 of a screw, h^3, which passes through a projection, h^4, on the sliding-bar, & may be screwed to a greater or less extent into the bed-plate at h^5. To this sliding-bar, and below the bed-plate, is fastened a foot or cross, h^6, upon whose face act vibrating toes h^7, h^7, forming part of the lever f^3. As this lever vibrates, its toes, acting upon the foot alternately, will move the sliding-bar in a direction opposite to that of arrow x, and the spring h^1 will return the bar in the opposite direction as soon as the toes per-
58 mit. This sliding-bar will, therefore, reciprocate to & fro once during each stroke of the needle, the extent of its motion being governed by the set-screw h^3. Upon this sliding or reciprocating surface the cloth or material to be sewed is laid, and it is clear would, if this were the whole of the contrivance, be but slightly affected by its vibrations.

In order, therefore, to move the cloth, there is applied to the surface before described another surface, l^2, mounted upon a spring-lever, l, the whole constituting a species of clamp-jaw by which the cloth or material to be sewed is, during the action of the machine, held upon the roughened surface before described. The surface l^2 is mounted upon a spring in order that the surfaces may grasp between them different thicknesses of material, and also in order that the roughened surface may more readily move in one direction without moving the cloth.

Now, in the action of these surfaces the material to be sewed is held still by the needle & by its friction upon the bed-plate, while the lower surface moves in the direction of arrow x, but when the needle has risen free from the cloth the lower surface moves in the opposite direction and draws with it the cloth, which is held in firm contact with its roughened end by means of the comparatively smooth upper surface. In order to make this operation certain the lower surface should be roughened by small teeth like saw-teeth, which, when moved in one direction, slip under without moving the cloth, but when moved in the other direction catch the material in their points & force it to traverse with them.

By inspection of the drawings it will be perceived that these
59 surfaces are arranged in close proximity to the points where the needle enters the cloth, holes or notches o o^1 being pierced

through them to give it free passage. The upper surface, therefore, strips the cloth off the needle as it rises, thus obviating the necessity of a separate apparatus for that purpose.

As it is necessary to remove and replace the cloth with convenience, the spring-lever which carries the upper surface is pivoted at *m*, and prolonged, having at its extremity a handle, *n*, and also a locking-pin, or some similar contrivance, to hold the lever in such position that the upper surface shall lie over the lower one. When it is required to enter or remove the cloth the pin is loosened and the upper surface is turned away from the lower one until the object is effected.

The length of stitch depends upon the amount of motion of the lower surface, and this is regulated by the set-screw before described. Now, my method of feeding the cloth by the joint action of two surfaces may be variously modified without departing from my invention, as the precise method of moving one of the surfaces is unimportant so long as either surface is moved with reference to the other so as to produce the effect as herein described, the two grasping the cloth by a spring pressure. These surfaces, moreover, may be arranged in various parts of the machine, and the mechanical devices of trains of apparatus for imparting motion to one of them may be modified or changed in any manner that convenience or fancy may suggest, so long as the surfaces themselves, between which the cloth or material to be sewed is
60 grasped, act in conjunction with each other to produce the effects herein described.

These surfaces acting as described may also be applied and used in conjunction with devices for holding the cloth at rest when necessary, other than the needle itself, and the friction of the table; and they may also be used in connection with a distinct apparatus for stripping the cloth from the needle. The precise method of removing one surface from the other in order to introduce or remove cloth is also unimportant, as one surface may be parted from the other in various ways well known to mechanics, and it will be still my invention so long as one of the surfaces of a feeding mechanism for a sewing-machine is removed from the other, substantially in the manner and for the purposes herein described.

I do not think it needs any demonstration to show that my invention attains the end proposed; no basting is needed, no baster-plate is required; the material must be fed regularly, and the stitches consequently of equal length, as that depends upon mechanical precision in the construction of the toes, foot, and set-screw, or other equivalent devices that may be used in place of them, and when the needle is in the material the latter may be turned or twisted between the feeding-surfaces, thus bending & curving the seam by a motion of the hand of the operator; the stitch as it is formed is, moreover, in plain sight, and defects may be discovered at once.

Having thus described my apparatus, I would state that I do not claim a spring-foot or rod serving only the purpose of stripping the material to be sewed off the needle, or holding the cloth down to
61 a table as the needle rises, as such a contrivance has been used prior to the date of my invention.

But I do claim as of my own invention the method of causing the cloth or material to be sewed in a sewing-machine to progress regularly by the joint action of the surfaces between which it is clamped, and which act in conjunction substantially in the manner & for the purposes herein specified.

Secondly. I claim holding the cloth or other material at rest by the

needle or its equivalent, in combination with the method of causing it to progress regularly, the whole substantially as herein set forth.

Thirdly. I claim arranging feeding-surfaces, substantially such as are herein specified, in such relation to the needle as herein set forth, that they, or one of them, shall perform *shall perform* the office of stripping the cloth or material from the needle as it rises or recedes from it as herein described.

Fourthly. I claim so mounting and attaching one of the feeding-surfaces to some other part of the machine that it may be removed or drawn away from the other surface at pleasure, substantially in the manner and to effect the objects herein set forth.

ALLEN B. WILSON.

Witnesses:

B. J. PERRY.
JAMES J. GILMORE.

62 (Here follows diagram marked page 62.)

63 *Exhibit C to foregoing bill of exceptions.*

No. 414.

The United States of America to all to whom these letters-patent shall come:

Whereas Allen B. Wilson, of Waterbury, Conn., has alleged that he has invented a new and useful improvement in sewing-machines, (for which letters-patent were issued to him dated 12th Nov'r, 1850, the same surrendered, cancelled, & new letters issued to him on an amended specification dated 22nd Jan'y, 1856, which last letter having been surrendered by him, the same have been cancelled and new letters ordered to issue to him on his second amended specification,) which he states has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvement, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of fifteen dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose.

These are therefore to grant, according to law, to the said Allen B. Wilson, his heirs, administrators, or assigns, for the term of fourteen years from the said twelfth day of November, one thousand eight hundred and fifty, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said im-
64 provement, a description whereof is given in the words of the said Wilson in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent-Office has been hereunto affixed.

Given under my hand, at the city of Washington, this ninth day of December, in the year of our Lord one thousand eight hundred and fifty-

six, and of the Independence of the United states of America the eighty-first.

ROBERT McCLELLAND,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent-Office.
[L. S.]
C. MASON,
Commissioner of Patents.

The schedule referred to in these letters-patent, and making part of the same.

To all whom it may concern:

Be it known that I, Allen B. Wilson, of Warterbury, New Haven County, State of Connecticut, formerly of Pittsfield, Berkshire County, Mass., have invented certain new and useful improvements in machinery for sewing seams, and that the following specification, taken in connection with the drawings, is a full, clear, and exact description
65 thereof. These drawings exhibit my invention as applied to a machine invented by myself, as it is more easy to exemplify by means of a description of an entire machine, but I wish to be distinctly understood that my improvements and invention, as set forth and claimed in this patent, are applicable to sewing-machines of various classes, and differing in form and arrangement from each other and from the machine herein described.

In the drawing, figure first is a perspective view of the machine from the upper side thereof. Figure second is a plan of the bottom of the machine. Figure third is a vertical section through the machine, in the plane of the needle-carrier. Figure fourth is a detailed view of the operative mechanism of the needle.

The same letters refer to the same parts in all the figures.

Previous to the date of my invention numerous sewing-machines had been invented and put in operation having two distinct classes of methods for feeding the material to be sewed and for supporting it while passing through the machinery. In the first class the article to be sewed was supported upon a horizontal table, and was by the hand of an operator moved at intervals under the needle, no mechanical or automatic feed being provided. In the other class of machinery the material to be seamed was, by means of clamps or pins, or some equivalent thereof, secured to a moving plate, technically called a baster-plate, which also supported or carried the material, and was, by a mechanical connection with other parts of the machine, moved along step by
66 step at proper intervals. In some of these machines of later date this baster took the shape of an endless band or chain, thus obviating the necessity of running back the baster-plate after a certain length had been sewed. In the former class of machinery the cloths being supported by a table, could be turned and twisted at will to sew crooked seams, but the regularity of stitch depended solely upon the skill of the operator. In the latter class the feed was as regular as machinery could make it, but as the cloth or other material was attached to and supported by the baster-plate which carried it, straight seams only, or those of moderate and tolerably regular curvatures, could be sewed. Now, the object of the first part of my invention is to unite the advantages of these two methods, to obtain in one machine the regularity of feed of the latter class and the capacity of sewing irregularly-curved seams found in the former class. The nature of the first part of

my invention, therefore, consists in combining a needle and shuttle, or their equivalents, to make stitches, with a table to support the material, and an automatic feed-apparatus which will move the cloth without supporting it, and to which the cloth is not attached, the whole substantially in the manner hereinafter set forth, whereby the cloth is fed regularly, so that stitches of uniform length are produced, while the cloth, being supported on a table or platform, and not confined to the feed-apparatus by pins or clamps, may be turned and twisted in the feeding-mechanism so as to sew irregularly curved seams.

67 Prior to the date of my invention, shuttles of sewing-machines were driven by a sort of picker-staff, as in ordinary power-looms, so that the shuttle was fairly thrown through a loop, or else they were caused to travel in their race by means of an arm moving with the shuttle, and connected at two points to it in such wise that one connection was broken before the shuttle entered a loop, while the other remained fast, and the former connection became fast again before the second reached the loop, when it in turn was detached until its point of attachment to the shuttle had passed by the thread, this attachment and re-attachment being effected by cams and springs. The former method was uncertain, as the shuttle passed the loops at different periods of the action of the needle, when the machine was driven at varying velocities. The second method was complex and liable to get out of order, and both were comparatively expensive.

The object of the second part of my invention is to drive sewing-machine shuttles by apparatus which shall follow their motions, or nearly so, as in the second method, while it is even less complex and expensive than the first method noted; and the nature of the second part of my invention consists in driving a sewing-machine shuttle by means of a yoke or pair of jaws, coincident with each other in their motion, and nearly coincident with the motion of the shuttle, which is so shaped that a greater or less part of it is embraced by the jaws, being held thereto by the shuttle-race, in which it travels.

In the drawings is represented a shuttle-machine with a bed-
68 plate *a a*, which serves to hold together all the parts, and at the same time serves as a table or platform for sustaining and supporting the material to be sewed.

This platform has attached to it proper journal-boxes *b b*, in which is secured a shaft *c*, provided at one end with a crank and fly-wheel, and also with a pin-wheel *d* and a cam *f*; the former communicating motion to the needle, the latter to the shuttle and feed-motion. The wheel *d* has projecting from its face two small pins d^1 d^2, which act alternately on two arms d^3 d^4 of a species of escapement, and thereby communicate an oscillating motion to the rock-shaft d^5, to which these arms are secured.

This shaft is mounted in proper journals upon the bed-plate, and carries a needle-bar or stalk d^6, upon whose back is fastened a spring d^8, while the needle itself d^7 is attached to the bar in any suitable manner. The needle is curved, is provided with an eye near its point, and is also slightly grooved on its convex side so as to guide the thread.

Upon the bed-plate is mounted a standard *e*, supporting an axis e^1, upon which is mounted a bobbin e^2 containing thread, whose end is carried under a guide e^3, afterward through a hole in a take-up and let-off spring d^8, then through an aperture on the needle-carrier, and finally through the eye of the needle itself. As the driving-shaft
69 revolves the needle reciprocates, passing back and forth thro' the material to be sewed. The cam *f*, before referred to, has,

formed on its surface, a grooved track or pin-way f^1, in which rests a pin f^2, projecting from a small lever f^3, pivoted at f^4 under the bed-plate of the machine.

This track is so formed as to alternately move and stop the lever f^3 so that it vibrates in one direction when the needle is in the cloth, then pauses while the needle is out of the cloth, returns in the opposite direction when the needle is again passed through the cloth, and then pauses a second time. Upon the end of this lever are two jaws f^5 f^6, which embrace a portion of the shuttle g, which is confined by its race g^1 in such a manner that it cannot recede out of the reach of these jaws. By looking at Figure 2 it will be seen, also, that the shape and position of the jaws, and the curve and pathway of the shuttle, are in such relations to each other that only one jaw can touch the shuttle at any one instant of time. The shuttle is pointed at both ends in the present instance, and provided with an ordinary thread-bobbin, and a guide or eye through which the thread passes. In the action of the machine, while the needle is still in the cloth, and a loop of thread partially open, the shuttle approaches this loop with the arm of the jaw furthest from the loop in contact with the shuttle and driving it, while the other jaw is out of contact and permits the shuttle to pass on one side of the loop-thread, while the jaw pursues its course on the other. The jaws continue to travel, and the shuttle to pass through the loop,
70 until the thread reaches the hindermost and driving jaw, when it slips out between that jaw and the shuttle. The stitch is now drawn up, the needle enters the cloth again, the yoke or jaws vibrate a short distance until the jaw that was in contact becomes free and that which was disengaged takes hold, and the same operation as to driving the shuttle and entering and slipping past the loop-thread takes place in the opposite direction. The shuttle-thread is thus zigzagged through the loops of needle-thread, rendering the stitch less liable to unravel. But the shuttle would be moved in precisely the same way in a machine where it always entered the loop from the same side, the difference being that it would pass through a loop only when moving in one direction. Upon the platform or bed-plate a is located a sliding-bar h, having a roughened surface on its upper side near one of its ends. It is pressed in the direction of the arrow x by a spring h^1, secured to the bed-plate, the length of throw of this spring being limited by the head h^2 of a screw h^3 which passes through a projection h^4 on the sliding-bar, and may be screwed to a greater or less extent into the bed plate h^5. To this sliding-bar and below the bed-plate is fastened a foot or cross h^6 upon whose face act vibrating toes h^7 h^7, forming part of the lever f^3.

As this lever vibrates, its toes, acting upon the foot alternately, will move the sliding-bar in a direction opposite to that of arrow x,
71 and the spring h^1 will return the bar in the opposite direction as soon as the toes permit. This sliding-bar will therefore reciprocate to and fro once during each stroke of the needle, the extent of its motion being governed by the set screw h^3. Upon this sliding or reciprocating surface the cloth or material to be sewed is laid, and it is clear would, if this were the whole of the contrivance, be but slightly affected by its vibrations. In order, therefore, to move the cloth, there is applied to the surface before described another surface l^2 mounted upon a spring-lever l, pivoted at m, and provided with a handle n, the whole constituting a species of clamp-jaw, by which the cloth or material to be sewed is, during the action of the machine, held upon the roughened surface before described.

The surface l^2 is mounted upon a spring in order that the surfaces may

grasp between them different thicknesses of material, and also in order that the roughened surface may more readily move in one direction without moving the cloth. In the operation of the machine, the cloth, or material to be sewed, is laid upon the platform, or supporting-table and bed-plate *a*, with a portion of it lying over the lower roughened feeding-clamp, and is held at rest by its friction on the table or platform, and by the needle which rests in the cloth, while the lower surface moves in the direction of arrow *x*; but when the needle has risen free from the cloth, the lower surface moves in the opposite direction, and draws with it the cloth, which is held in firm contact with its roughened end by means of the comparatively smooth upper surface. In order to
72 make this operation certain, the lower surface should be roughened by small teeth, like saw-teeth, which when moved in one direction, slip under without moving the cloth, but when moved in the other direction, catch the material on their points, and force it to travel with them. Now it will be perceived that the stitches formed will be of regular length, under any given adjustment of the machine, as that regularity depends upon mechanical accuracy of construction; and also that the cloth or material to be sewed, being held up and supported by a table, can be twisted and turned thereon to sew curved seams, as it is not attached to or supported by the feeding-apparatus as was the case in the former machines, but is merely grasped in a small portion of its surface, by the feeding-clamps or jaws. It also is evident that my method of driving a shuttle is simple, inexpensive, not liable to derangement, and moreover is superior to any picker-staff arrangement, as the motion of the shuttle will properly coincide with that of the needle, under varying velocities of the machine. The form or precise construction of my supporting-table is unimportant, so long as it supports cloth in such manner that it may be stitched by the joint action of a needle and shuttle, or their equivalents, and at the same time presents the cloth properly to the action of the feeding-surfaces, and permits of such a turning and twisting of the material to be sewed as may be practically necessary, without disturbing the action of the feeding-surfaces or clamps, and the feed-apparatus, making part of the combination which I claim as my invention, may be variously modified, without losing its character as
73 an equivalent of the precise mechanism herein described, so long as it feeds the material regularly, and does not require the cloth to be attached to it, by pins or other equivalents, while it at the same time permits the cloth to be turned and twisted irrespective of the line of motion of the feeding mechanism. The precise shape of my shuttle and its containing yoke or jaws are also immaterial, so long as the latter alternately, during the action of the machine, come in contact with, and drive the former, permitting the shuttle-joints freely to enter the loop of thread, and allowing that thread to slip out practically unimpeded between the driving-jaw and the shuttle itself, and so long as these jaws have a motion nearly coincident with each other, and with the shuttle which they drive, both in the extent of their travel and in the periods at which they commence to move, or pause, or return again.

The distinction, in mechanical effect, between my jaws and the old picker-staves, being that the former push the shuttle along, following it up in its passage, while the latter strike it a blow and throw it, without following the shuttle throughout the extent of its path.

The former in their action travel, passing by and beyond the loop, or the place where it is formed, and then returning again past that spot, while the latter complete their whole motion on one side of the loop only, & never pass the loop or the place where it is formed; each picker-staff

vibrates nearly up to the loop and then stops and returns. The precise position of the shuttle, in reference to the loop, at any period of the action of the machine, is in my machine dependent upon the
74 mechanical construction of the parts of the machine, and is not affected practically by the velocity at which the machine is driven, but when picker-staves are used, and the shuttle is thrown by a blow, whose force depends not only upon the distance through which the staff travels, but also upon its velocity, then the precise time at which a shuttle shall enter a loop, or leave it, varies not only with the velocity of the machine, but also with the varying weights of the shuttle, as it happens to contain a greater or less weight of thread. Such a want of precision in the motion of the shuttle is found to be injurious in machinery so nice in its operation, and delicate in construction, as a sewing-machine.

The method of passing the shuttle through the loops, first from the right, and then from the left, has a tendency to set the two threads in such relation to each other, in the finished stitch, that it is less liable to rip than when the shuttle enters from one side only, as usual; it also diminishes the number of motions required for the promotion of a single stitch, and the double-pointed shuttle is a necessary adjunct in a machine where the shuttle-thread is thus passed through the needle-thread.

It is hardly necessary to state that the different features of my invention may be used separately from each other with good effect, in connection with sewing-machines differing in construction and operation from that herein described. Having thus described my improvement, I claim, as my own invention—

First, the combination in a single machine of these three following
75 elements, namely, a table or platform to support the material to be sewed, holding it for the action of the needle, and presenting it properly to the grasp of the feeding-apparatus, a sewing-mechanism proper, consisting of a needle and shuttle, or their equivalent, and a mechanical feed automatic, and causing the cloth to progress regularly to which the cloth is not attached, and so grasping the cloth that it may be turned and twisted by the hand of an operator, such twisting not interfering with the regular progression of the cloth, and the whole being constructed, and acting together, and in combination with each other, substantially in the manner and for the purposes herein specified.

Second. I claim moving a shuttle, so shaped and held by its race, that jaws may embrace it, by means of two jaws which are alternately in contact with the shuttle, and are constructed and move substantially in the manner herein set forth, making and breaking their contact, without any aid from cams or springs, or the equivalents of such devices.

And lastly, I claim a double-pointed shuttle, substantially such as is herein specified, in combination with jaws for driving it, substantially such as are described, whereby the shuttle may be thrown alternately from opposite directions through loops, without practically disturbing the loop-thread.

In testimony whereof, I have hereunto subscribed my name at the city of New York, on the 17th day of September, A. D. 1856.

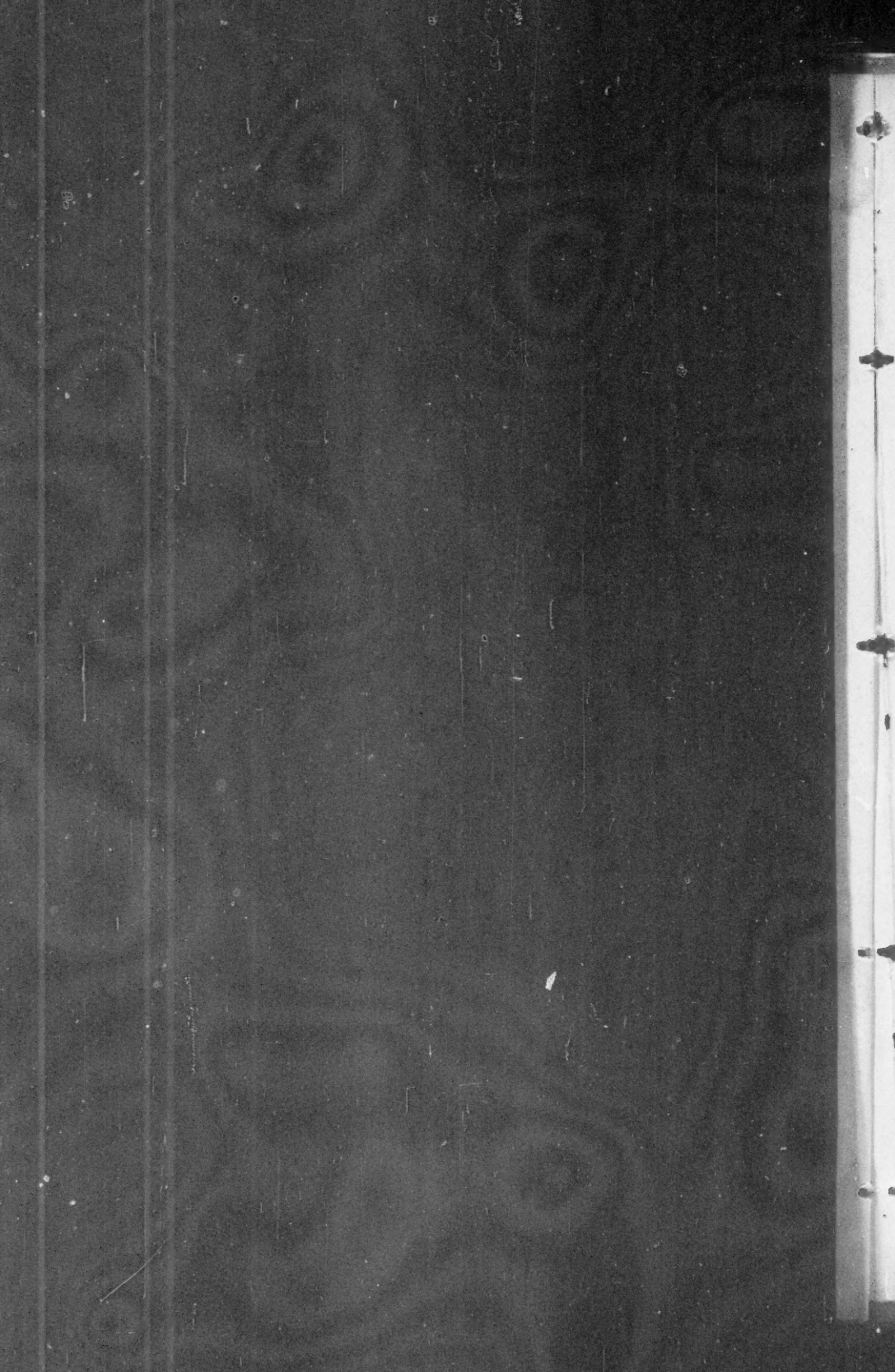
ALLEN B. WILSON.

Witnesses—

ALLEN MELVILLE.

M. B. ANDRUS.

76 (Here follows diagram marked page 76.)



77 EXHIBIT D.

The U. States Patent-Office, to all persons to whom these presents shall come, greeting:

This is to certify, that the annexed is a true copy, from the records of this office, of the letters-patent granted I. M. Singer, August 12th, 1851, No. 8294.

In testimony whereof, I, T. C. Theaker, Commissioner of Patents, have caused the seal of the Patent-Office to be hereunto affixed, this twenty-seventh day of December, in the year of our Lord one thousand etght hundred and sixty-five, and of the Independence of the United States the ninetieth.

[SEAL.] T. C. THEAKER.

No. 8294.

The United States of America, to all to whom these letters-patent shall come:

Whereas Isaac M. Singer, of New York, N. Y., has alleged that he has invented new and useful improvements in sewing-machines which he states have not been known or used before his application; has made oath that he is a citizen of the United States, that he does verily believe that he is the original and first inventor or discoverer of the said improvements, and that the same have not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and pre-
78 sented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said improvements and praying that a patent may be granted for that purpose:

These are, therefore, to grant according to law, to the said Isaac M. Singer, his heirs, administrators, or assigns, for the term of fourteen years from the twelfth day of August, one thousand eight hundred and fifty-one, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvements, a description whereof is given in the words of the said Singer in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof, I have caused these letters to be made patent, and the seal of the Patent-Office has been hereunto affixed.

Given under my hand, at the city of Washington, this twelfth day of August, in the year of our Lord one thousand eight hundred and fifty-one, and of the Independence of the United States of America the seventy-sixth.

WILL. A. GRAHAM,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent-Office.

[L. S.] THO'S EWBANK,
Commissioner of Patents.

79 The schedule referred to in these letters-patent and making part of the same.

To all to whom these presents shall come:

Be it known that I, Isaac M. Singer, of the city, county, and State of New York, have invented certain new and useful improvements in the

machine for sewing seams in cloth and other substances, and that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which Figure 1 is a front-elevation of the machine; Fig. 2, a side-elevation; Fig. 3, a plan of the table with the plates that cover the shuttle removed; Figure 4, a vertical section, passing through and in the plane of the cam-shaft; Fig. 5, a cross-section, passing between the carriage of the shuttle-driver and the wheel that carries the crank-pin and looking towards the front of the machine; and Fig. 6, a section of feed-motion. The same letters indicate like parts in all figures.

My present invention is of improvements on a machine heretofore invented by me, and for which an application is now pending.

The first part of my present invention relates to the method of carrying the shuttle, and consists in operating the shuttle by a driver, between the ends of which the shuttle lies, with a slight play, so that when the driver acts on the back end of the shuttle to force it through the loop formed by the thread on the needle, there is sufficient space
80 between the forward end of the driver and the shuttle for the passage of the thread, and at the end of this motion the shuttle remains in a state of rest for an instant, whilst the driver receives a slight back movement to permit the passage of the thread between the back end of the shuttle and the driver, when the needle draws the stitch.

The second part of my present invention relates to the method of drawing the stitch by the shuttle, and consists in giving to the shuttle, after the needle has been drawn out of the loop, a slight additional forward movement, as the needle is completing its upward movement, and at the time the feed-motion is given to the cloth, by means of which there are three pulls given simultaneously, viz, the upward pull of the needle on the needle-thread, the feed-motion of the cloth in one direction, and of the shuttle in the opposite direction, so that the two threads are drawn together to draw the stitch tight.

The third part of my invention relates to the method of controlling the thread, during the downward motion of the needle, by means of a friction-pad, which makes a slight pressure on the thread as the needle descends.

The thread from the friction-bobbin must pass through a guide, connected with the *with* needle-carrier, so that, as the needle rises, the thread shall be drawn tight to form the stitch, and from this it follows that, as the needle descends and with it the guide, the thread will form a loop above the cloth, which is liable to be caught or to be cut by the needle. With the view to obviate this, in my previous invention, to which I have above referred, I carried the thread through a spring-
81 guide, the tension of which took up the slack as the needle descended; and although this answered the purpose, to a certain extent, yet, if there was not sufficient friction presented to the thread by the cloth, the moment the needle began to rise, the tension of the spring drew out the loop so that the shuttle failed to pass through the loop, particularly when working rapidly, in which case the rebound of the spring was very apt to draw out the loop. The defects of the spring-guide are, however, entirely obviated by the employment of a friction-pad, which, being inert, presents sufficient resistance to the thread, as the needle descends to prevent the making of slack above the cloth, and yet not sufficient to prevent the needle from drawing the thread thro' to make the loop below; and when the needle rises, there is no

tendency to draw out the loop, the friction-pad simply holding the thread in place.

The fourth part of my present invention consists in placing the friction-bobbin, from which the thread is drawn by the needle, on an adjustable arm attached to the frame so that its angle, relatively to the guide on the needle-carrier through which the thread passes, can be changed at will, so that, by changing the position of the arm, the motion of the needle-carrier will draw out more or less thread, as may be required.

In my previous machine, to which reference has been made, the bobbin was carried by the needle-carrier, and hence the motion of the needle had to be equal to the length of thread required to form the loop, which was objectionable, as, in many instances, this range of motion was unnecessarily long for all other purposes; but, by placing the bob-
82 bin on an adjustable arm, and thence carrying a thread through a guide on the carrier, by simply shifting the position of the bobbin, the length of thread for forming the loop can be either longer or shorter than the range of motion of the needle. In this way I am enabled to construct the machine with a range of motion just sufficient to form the stitch, and then regulate the length of thread at pleasure for the loop.

And the last part of my invention relates to the method of feeding the cloth during the operation of sewing to determine the length of the stitches. Heretofore the cloth has either been slipped on to teeth arranged in a bar or on the periphery of a feeding-wheel, which is objectionable, for the reason that the cloth is pierced by the numerous pins, and there was great difficulty of turning the cloth to sew curved seams when thus held by pins. To avoid these objections the nature of this part of my invention consists in moving the cloth by the friction-surface of a wheel whose periphery is formed with very fine grooves, the edges of which are slightly serrated, against which surface the cloth is pressed by a spring-plate or pad.

In the accompanying drawing *a* represents the frame and *b* the needle on the lower end of carrier constructed and operated in manner similar to my previous invention above referred to. The thread *c* comes from a bobbin, *d*, which turns on a stud, *e*, and held by friction in any desired manner to prevent it from turning freely. From this bobbin the thread passes through a guide *f*, attached to and moving with the needle-
83 carrier, and thence it passes through the eye of the needle some distance above the point.

The stud *e*, on which the bobbin turns, is on the outer end of an arm, *g*, secured by a screw, *h*, to the frame, so that the bobbin can be elevated or depressed to any extent desired. If the bobbin be elevated to the position represented by dotted lines *i*, the end of the thread being held by the cloth, it will be seen that the length of thread drawn from the bobbin to make the loop for the passage of the shuttle will be equal to the range of motion of the needle; and, if depressed, to the position represented by the dotted lines *j*, that the length drawn from the bobbin will be double the range of motion of the needle, and that this quantity will vary as the bobbin is either elevated or depressed. In this way, whatever may be the range of motion of the needle, the length of thre'd for the loop, various qualities of sewing can be varied at pleasure by simply shifting the position of the bobbin.

The cloth to be sewed is placed on the table of the frame and resting on the periphery of the feeding-wheel *k*, and pressed thereto by a plate, *l*, on the end of a sliding-bar, *m*, which is forced down by helical spring, N. Instead of arming the periphery of the feed-wheel with pins, as heretofore, a fine thread is cut thereon, or, instead of threads, fine parallel

grooves can be cut; but in either case the threads or fillets between the grooves are brought to a sharp edge, and if made cast iron, these edges by the breaking of the metal will become slightly serrated; but if made of wrought iron, they should be slightly serrated by any appro-
84 priate instrument. When the cloth is pressed against this surface so grooved and serrated, a sufficient hold is taken of the surface of the cloth to move it forward without slipping and without the necessity of piercing the cloth, and therefore the attendant can turn the cloth as may be desired to sew curved seams, which could not be done conveniently when pins on the periphery of the wheel passed through the cloth.

The feeding-motion is given to the feed-wheel by means of a knuckle, *o*, jointed to a lever, *p*, that turns on the hub *q* of the wheel, so that when the lever *p* is moved in the direction of the arrow the outer end of the knuckle *o* is forced in contact with the inner periphery of the feed-wheel with sufficient force to turn it, without the necessity of cutting the teeth on the said periphery. The required motion for operating the lever and knuckle is obtained from a cam, *r*, on the cam-shaft, *s*, which at every revolution acts on an arm, *t*, of a rock-shaft, *u*, which carries another arm, *v*, connected by a link, *w*, with the lever, *p*, and provided with adjusting-nuts. There is a spring, *x*, which bears on the arm p^1 of the lever *p*, to force back the said arm and knuckle the moment the cam has passed, that the knuckle may take a new hold on the periphery of the wheel. As there are no teeth on the periphery of the wheel, and the knuckle acts on it simply by the bite of the surfaces, it will be perceived that any desired motion can be given to the wheel by simply regulating the play
85 of the lever. The play of the lever is regulated by the length of the link which connects it with the arm *v* of the rocker, the interposed spring answering the purpose of carrying back the arm and the rocker.

The shuttle a^1 is semi-cylindrical, with the forward end pointed and the back end rounded. It slides in a groove, b^1, in the table of the frame, and is embraced between the ends of a driver, c^1, that is, one end of the driver rests against the back end of the shuttle and the other end of the driver agains a shoulder formed by cutting out a part of the conical part of the forward end of the shuttle.

The shuttle should have sufficient play between the ends of the driver for the free passage of a thread between it and a driver at one end when the two are in contact with the other and vice versa.

The driver is attached to and operated by a carriage, d^1, adapted to slide in appropriate ways, e^1 e^1, in the frame, and this carriage is formed with a cam-groove, f^1, in which fits and runs a crank-pin, g^1, of a wheel, h^1, on the cam-shaft. The form of the cam-groove f^1 is represented in Fig. 5 and is such that as the crank-pin passes from the point 1 to 2 in the direction of the arrow, it carries the shuttle back, the needle at the same time descending to carry the thread through the cloth, and as the needle rises, forming the thread below the cloth into a loop, the shuttle moves forward by the passage of the crank-pin in the direction of the arrow from the point 2 to 3 in the cam-groove, thus causing the
86 shuttle to enter the loop, the thread passing between the point of the shuttle and the forward end of the driver. The shuttle is then brought to a state of rest by the continued motion of the crank-pin in a return direction in the cam-groove from the point 3 to 4, where it is concentric with the crank. From the point 4 to 5 the groove runs a little within the circle to give a slight back-motion to the shuttle-drive, that the thread may pass between the back end of the shuttle and the driver as the needle rises to draw the stitch, and then from 5 to 6 the

groove runs a little out of the circle to force the shuttle forward to draw the shuttle-thread, at the same time that the feed-motion is given to the cloth in the opposite direction and whilst the needle completes its upward motion, thus drawing the two threads simultaneously to complete and draw the stitch tight on both faces of the cloth. The motions above described are then repeated for another stitch. The thread, as it passes from the loop on the needle-carrier to the needle, passes under a spring pad j^1, attached to the frame, which pad makes a gentle pressure on it, so that as the needle descends to carry the thread through the cloth the slack formed by the descent of the needle shall be all above this pad, instead of being just above the cloth, where it would be liable to tangle or to be cut by the needle, and besides this the holding of the thread by the friction-pad during the descent of the needle is necessary to insure the carrying of the thread through the cloth in the same position, relatively to the needle, and thus insure the laying of the stitches in the same line.

87 What I claim in my invention, and desire to secure by letters-patent, is giving to the shuttle an additional forward-motion after it has been stopped to close the loop, as described, for the purpose of drawing the stitch tight when such additional motion is given at, and in combination with, the feed-motion of the cloth in the reverse direction, and the final upward motion of the needle, as described, so that the two threads shall be drawn tight at the same time, as described.

I also claim controlling the thread during the downward motion of the needle by the combination of a friction pad, to prevent the slack above the cloth, with the eye on the needle-carrier for drawing back the thread, for the purpose and in the manner substantially as described.

I also claim placing the bobbin, from which the needle is supplied with thread, on an adjustable arm attached to the frame, substantially as described, when this is combined with the carrying of the said thread through an eye or guide attached to, and moving with, the needle-carrier, as described, whereby any desired length of thread can be given for the formation of the loop, without varying the range of motion of the needle, as described.

ISAAC M. SINGER.

Witnesses—
CAUSTEN BROWN.
W'M H. BISHOP.

88 (Here follows diagram marked page 88.)

89 And, afterwards, to wit, this cause was continued from term to term, until, to wit, the 26th day of May, in the year of our Lord, one thousand eight hundred and seventy-one, on which said day an entry was made upon the journal of said court, in said case, in the words and figures following to wit:

Entry.

WILLIAM BURDELL ET AL. *vs.* DENIG & IDE. } 1465.—Trespass.

This case came on to be heard upon the motion for a new trial herein filed, and was argued by counsel, and submitted, and the court, on consideration thereof, do overrule the said motion.

And afterwards, to wit, on the 3d day of October, in the year last aforesaid, an entry was made upon the journal of said court, in said case, in the words and figures following, to wit:

Entry.

WILLIAM BURDELL ET AL.
vs.
AUGUSTUS M. DENIG ET AL. } 1465.—Trespass.

By consent of parties it is ordered that the entry herein made May 26, 1871, overruling the motion for a new trial, be and the same hereby is, set aside and held for nought, with all the rights and privileges to the parties hereto, as if said entry had not been made.

And afterwards, to wit, on the 3d day of November, in the year last aforesaid, an entry was made upon the journal of said court,
90 in said case, in the words and figures following, to wit:

Entry.—Judgment.

WILLIAM BURDELL ET AL.
vs.
AUGUSTUS M. DENIG AND WILLIAM E. IDE. } 1465.—Trespass.

The honorable H. H. Emmons, one of judges of this court, having taken his seat upon the bench, thereupon this case came on to be heard upon the motion for a new trial heretofore filed in this case and was argued by counsel and submitted. And the court, on consideration thereof, do overrule the said motion, and award judgment on the verdict. It is therefore considered that the said William Burdell et al., plaintiffs, recover of the said Augustus M. Denig and William E. Ide, defendants, the said sum of one hundred and twenty-five dollars, their damages aforesaid, in form aforesaid assessed, and also their costs herein taxed at $, and execution is hereby awarded therefor.

And afterwards, to wit, on the 25th day of July, in the year of our Lord one thousand eight hundred and seventy-three, came the plaintiffs and filed in the clerk's office of said court their error bond herein, which said bond is in the words and figures following, to wit:

Error bond.

Know all men by these presents that we, William Burdell, D. Marshall Smith, and Sumner T. Smith, principals, and Robert Shields and John J. Rickly, suretys, all of Columbus, Franklin County, Ohio, are held and firmly bound unto Augustus M. Denig and William E.
91 Ide, in the penal sum of five hundred dollars, to the payment of which, well and truly to be made, we do hereby jointly and severally bind ourselves, our and each of our heirs, executors, and administrators, firmly by these presents, sealed with our seals and dated this 25th day of July, A. D. 1873.

Whereas the above-named William Burdell, D. Marshall Smith, and Sumner T. Smith, have prosecuted a writ of error to the Supreme Court of the United States to reverse the judgment rendered in the case

wherein the said William Burdell, D. Marshall Smith, and Sumner T. Smith were plaintiffs, and Augustus M. Denig and William E. Ide, were defendants, by the circuit court of the United States within and for the southern district of Ohio:

Now, therefore, the condition of this obligation is such, that if the said, the above-named William Burdell, D. Marshall Smith, and Sumner T. Smith, shall prosecute their said writ of error to effect, and answer all costs if they shall fail to make good their plea, then this obligation shall be void; otherwise the same shall be and remain in full force and virtue.

WILLIAM BURDELL, [SEAL.]
By ROBERT SHIELD.
D. MARSHALL SMITH, [SEAL.]
By ROBERT SHIELD.
SUMNER T. SMITH, [SEAL.]
By ROBERT SHIELD.
ROBERT SHIELD. [SEAL.]
JOHN J. RICKLEY. [SEAL.]

Sealed and delivered in presence of—
RICHARD C. ROHRER.

92 THE UNITED STATES OF AMERICA,
Southern District of Ohio, ss:

I, Thomas Ambrose, clerk of the circuit court of the United States within and for said district, hereby certify the foregoing transcript to be truly taken and copied from the files and record of said court, in said cause, as the same remain in this office.

In testimony whereof I have hereunto set my hand and affixed the seal of said court, at Cincinnati, this 4th day of August, A. D. 1873, and in the 98th year of the Independence of the United States of America.

[SEAL.] THOMAS AMBROSE,
Clerk U. S. Circuit Court S. D. of Ohio.

93 Supreme Court.

WILLIAM BURDELL ET AL., PLAINTIFFS IN error,
vs.
DENIG & IDE, DEFENDANTS IN ERROR. } In error.

The plaintiffs in error come and say that, on the trial of this cause in the circuit court for the southern district of Ohio, at the June term thereof, 1866, and in the giving of judgment therein at the October term thereof, A. D. 1871, manifest error has intervened, to the injury of the said plaintiffs, and for causes of error the said plaintiffs say:

1. That the court erred in admitting in evidence the paper-writing of the date of Feb'y 4, 1857, signed by Burdell, purporting to assign to J. Payne Lowe the Singer patent sewing-machine.

2. The court erred in admitting in evidence the paper-writing of the date of 13th March, 1860, executed by Sarah Burdell & H. Crary.

3. The court erred in admitting in evidence the receipt of H. Crary, dated Oct. 9, 1861.

4. The court erred in refusing permission to the plaintiffs to prove the reason for the granting of a license to Rinkenberger.

5. The court erred in refusing to charge the jury as specially asked by the plaintiffs.

6. The court erred in charging the jury, that the license of Bur-
94 dell to J. Payne Lowe authorised Lowe, & all claiming title from him, to use in Franklin County the Singer machine, with a feeding-device operating upon the principle and plan of that patented to Wilson.

7. The court erred in charging the jury that the paper of 13 March, 1860, executed by Sarah Burdell & Crary, was a power of attorney coupled with an interest, and could not be revoked for any cause.

8. The court erred in charging the jury that Crary had authority to accept satisfaction for past infringements, and that his settlements with infringers for prior infringements were conclusive upon the plaintiffs and barred their right of action.

9. The court erred in its charge as to the rule of damages.

Wherefore the said plaintiffs say that, but for the ruling & charge of the court, they would have recovered judgment in said action for an amount exceeding $5,000, & pray that the judg't for the reason aforesaid be reversed, & that they be restored, &c.

C. D. COFFIN,
Att'y for Pl'ffs in Error.

95 (Indorsed:) 1465. U. S. circuit court S. D. of O. W'm Burdell et al., pl'ff in error, vs. Denig & Ide, def'ts in error. Assignment of errors. Filed July 25, 1873. Thomas Ambrose, clerk.

96 Supreme Court of the United States.

UNITED STATES OF AMERICA, *ss:*

The President of the United States of America to the honorable the judges of the circuit court of the United States within and for the southern district of Ohio, greeting:

Because in the record and proceedings, and also in the rendition of a judgment in a plea, which is in the said circuit court before you, between William Burdell, D. Marshall Smith, and Sumner T. Smith, plaintiffs, and Augustus M. Denig and William E. Ide, defendants, a manifest error hath happened, to the great damage of the said plaintiffs, as by their complaint appears; and it being fit that the error, if any there hath been, should be duly corrected, and full and speedy justice done to the parties aforesaid in this behalf: You are hereby commanded, if judgment be therein given, that then, under your seal, distinctly and openly, you send the record and proceedings aforesaid, with all things concerning the same, to the Supreme Court of the United States, together with this writ, so that you have the same at the city of Washington, on the first Monday in the month of December next, in the said Supreme Court, then and there to be held, that the record and proceedings aforesaid being inspected, the said Supreme Court may cause further to be done therein to correct that error, what of right and according to the law and custom of the United States should be done.

97 Witness the honorable Nathan Clifford, acting Chief Justice of the said Supreme Court of the United States, this 25th day of July, in the year of our Lord one thousand eight hundred and seventy-three, and of the Independence of the United States of America the 98th.

Attest:

[SEAL.] THOMAS AMBROSE,
Clerk.

98 THE UNITED STATES OF AMERICA,
Supreme Court of the United States:

To Augustus M. Denig and William E. Ide, greeting:

Whereas William Burdell, D. Marshall Smith, and Sumner T. Smith have obtained the allowance of our writ of error to the circuit court of the United States within and for the southern district of Ohio, directed to remove into the said Supreme Court to be holden at the city of Washington, on the first Monday in the month of December next, the record of a certain plaint, process, proceedings, and judgment in an action of trespass in the case, wherein the said William Burdell, D. Marshall Smith, and Sumner T. Smith, in that action lately recovered against you, the said Augustus M. Denig and William E. Ide, a judgment for one hundred and twenty-five dollars and costs, as by the said record in the said circuit court remaining appears, in which said record and proceedings, and also in the rendition of the judgment thereupon, manifest error hath intervened, as by the said William Burdell, D. Marshall Smith, and Sumner T. Smith we are informed, and our said writ of error granted, issued, and allowed as aforesaid, for the purpose of correcting the errors aforesaid alleged, if any there be: You are, therefore, hereby commanded and cited to be and appear before the judges of the said Supreme Court, at the city of Washington, at the next term of said court, to be holden on the first Monday in the month of December next, to have the errors aforesaid corrected, and the judgment of our said Supreme Court thereupon.

99 Witness the honorable Nathan Clifford, acting Chief Justice of the United States of America, this 25th day of July, in the year of our Lord one thousand eight hundred and seventy-three, and of the Independence of the United States of America the 98th.

[SEAL.] PHILIP B. SWING,
Judge U. S. District Court, S. D. of O.,
No Judge of the Circuit Court being present.

COLUMBUS, OHIO, *August* 1873.

This writ to me issued at Cincinnati, Ohio, on first day August, 1873, and true copy by me served in Franklin County, Ohio, as follows:

Rec'd the writ and copiyes, August 7th, '73, and served one copy personelly on Augustus M. Denig, and W'm. E. *Eid* being deseased, I left a copy at the bank of w'ich W'm *Eid*, the son of W'm E. *Eid*, is cashier, he being the suc'ess*ison* of his father and order'd to sett*ell* all bu*i*sness of said estate.

W. R. THRALL,
U. S. Marshal, S. D. O.
ROB'T CHADWICK,
Deputy.

Serv., 4.00; copy, ea., 1.00; 123 m., 7.38—$12.38.

(Indorsement on cover:) No. 680. William Burdell, D. Marshall Smith, and Sumner T. Smith, plaintiffs in error, vs. Augustus Denig & William E. Ide. S. Ohio C. C. U. S. Filed 22d December, 1873.